

Niina Sallinen, Pasi Juvonen & Taina Vuorela (eds.)

LAB Innovations Annual Review 2020

The Publication Series of LAB University of Applied Sciences, part 9



 **LAB University of
Applied Sciences**

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LAB Innovations
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Foreword

Pasi Juvonen

Stories of research, development and innovation activities at LAB University of Applied Sciences

You have made a good choice by deciding to read the first-ever annual review of the Innovation Commercialisation focus area of the LAB University of Applied Sciences (LAB). The LAB Innovations Annual Review 2020 uses the four themes

- Experimental development ecosystems for innovations
- Renewing and evolving entrepreneurship
- Business design and thick value
- New radical initiatives

to describe the results and lessons learnt in the research, development and innovation (RDI) activities of the Innovation Commercialisation focus area in 2020.

There is always uncertainty associated with the future but, through experiments, we can gain new kinds of information and experiences. Experiment-based information

and experiences can mitigate risks associated with investment decisions, among other things. In the best-case scenario, experiments are carried out together with companies and other organisations and the lessons learnt are gradually refined into new product, service or business model innovations. The articles in the publication's "Experimental development ecosystems for innovations" category showcase and follow up on experiments, pilots, simulations and innovation-related workshops carried out in various experimental development ecosystems as well as their results and lessons learnt.

The business environment, working life and entrepreneurship are changing at a fast pace and we at the LAB University of Applied Sciences want to contribute to enabling the surrounding society to benefit from this change. At our best, we manage to predict future trends. However, sudden, surprising changes sometimes create a need to adapt to the new situation. The articles under the "Renewing and evolving entrepreneurship" category describe experiences of coopera-

tion related to the transformation of competence and work, entrepreneurship, business digitalisation and responsible business operations.

The concept of value in itself has undergone a metamorphosis, in which not only financial profit is significant but also individual and shared experiences matter. Many of the previously physical products are nowadays abstract services that are used by paying a monthly fee to the service provider. In purchasing behaviour, themes such as sustainability and participation have become more prominent. These and many other points of view are discussed in the articles under the publication's "Business design and thick value" category.

Growth and the closely intertwined internationalisation often require courage both in operating methods and in content. In the best case, the outcome is radical innovations and disruptive solutions – market rebels of their time – that change the entire sector. The "New radical initiatives" category includes articles about experiments and skill sets that are entirely new in LAB's context or initiatives that have a larger scope than before.

Due to the COVID-19 pandemic, we are living an extremely exceptional year, which can

naturally be seen in the articles in this annual review of the focus area. As in many other areas of society, a giant digital leap has been taken in the RDI activities of the LAB University of Applied Sciences. Everyday project interaction, workshops and events, among other things, have to a significant extent moved into a virtual world, to digital channels and platforms. Perhaps this will make us appreciate physical encounters more in the post-pandemic era and make us invest more in them.

Heartfelt thanks to all the authors of the articles who made this publication possible. I would also like to thank RDI Specialist Niina Sallinen for editorial work, Senior Lecturer Taina Vuorela for subject matter review and LUT Academic Library's Information Specialist Riikka Sinisalo for the technical review of the publication.

At LAB, we want to help companies and other organisations develop and succeed in the rapidly changing world. Contact us when you need a partner in development!

Pasi Juvonen, RDI Director
Innovation Commercialisation focus area



**EXPERIMENTAL
DEVELOPMENT
ECOSYSTEMS FOR
INNOVATIONS**

Olga Bogdanova, Ekaterina Kondrashova & Juha Iso-Aho

Building Bridges for Cross-Border Alliance: Educro Project

EDU-CREATING NEW CUSTOMER VALUE THROUGH CROSS-BORDER COOPERATION	
Project period	01.10.2019 – 31.03.2022
Funding	South-East Finland-Russia CBC
LAB's role	Lead partner
Project website	https://educro.org/



Introduction

This article is aimed at sharing interim results of the EDUCRO project, funded by the South-East Finland – Russia CBC 2014-2020 programme. The EDUCRO project has been initiated to improve the level of practical business education in the culture and tourism sectors in the South Karelia region in Finland and St Petersburg in Russia. Collaboration on the cross-border and cross-sectoral level is an integral part of the project activities, as well as employing new models of educational co-creation. This article illustrates the stages and practices of building a cross-border alliance, outcomes of the educational needs assessment, and the process of developing a professional training programme, based on the experiences and expertise of partners and revealed education-

al needs. Besides, these processes are linked to the existing literature on university-collaboration and analysis of the needs for professional development.

Background of the project: exploring motivation and resources of the partners

Building a dynamic and robust alliance requires creating an environment that would make it possible to enjoy the project benefits across participants (Awasthy et al. 2020, 55). The critical aspects of the process of developing partnerships include motivation for cooperation, leadership, understanding the cultural context and resources, creating trust, and jointly reaching objectives (Wilson 2012). Mutual understanding of the potential variety of interactions between the education-

al partners, cooperating organisations from the culture and tourism sector, and students, was one of the critical tasks at the beginning of the project. According to Seppo & Roolah (2012, 205), contemporary university-industry cooperation projects are non-linear and interactive and are driven by different motivations of the partners.

In the initial stage of the project, the project partners, LAB University of Applied Sciences (LAB), Institute for Cultural Programmes (ICP), and Humak University of Applied Sciences (Humak), defined the motivation, leadership structure, and resources. One of the main results of the project would become the improvement of cross-border and cross-sectoral competencies of each partner, even though each partner had extensive experience of Finnish-Russian collaboration. LAB had a network of strategic partner universities in St Petersburg; one example is cooperation with St Petersburg State Economic University (now St Petersburg State University of Economics, or UNECON), which resulted in the Joint course project between Master programs of St Petersburg State Economic University and Saimaa University of Applied Sciences (now LAB). Since 1999, the Institute for Cultural Programmes in St Petersburg has been involved in the development and implementation of training programmes for the culture industry professionals in partnership with organisations from North-West Russia, Denmark, Norway, and Finland. Humak has been present in South Karelia since 1998 and acted as an educator and developer in the fields of cultural management, the creative economy, and cultural tourism. The cultural management students

organised various events, and one of them was Ugrijuhla Festival in 2000-2011, which presented Finno-Ugrian Cultures and invited several visiting artists and groups annually from Russia to Imatra.

Another motivation for cooperation between the educational partners was exchanging ideas, concepts, and methods. Collaboration on international training programme development is an iterative process that required a shared understanding of the various techniques and tools in professional training. The essence of the Experimental Developmental Ecosystem developed at LAB is in the practical application of knowledge and know-how through the coaching sessions, real-life projects, innovation brainstorming sessions, and practical ICT skills (Juvonen & Kurvinen 2018, 84-85). This ecosystem enables meta-learning, or reflection, and application of knowledge, in the setting of availability of any information. The ICP, being a significant hub for culture development not only in St Petersburg but in the Northern Dimension area, is a valuable source of experiences of organising cross-border professional training programmes based on accumulated responses from cultural managers, collected data and statistics from informational resources, managed and implemented projects. Humak's contribution to EDUCRO goes beyond regional expertise: a significant resource for the project is the virtual incubator Creve (Creative Venture). Creve offers online business services, such as group guidance and virtual accelerators for the creative industries, as well as helping to adopt creative ways of thinking into other sectors. Creve helps entrepreneurs in every step of



Picture 1 (left). Creative Industries Hackathon “Hack the future” in St Petersburg on November 12, 2019. (Picture: Olga Bogdanova).

Picture 2 (right). CBC Annual Event in St Petersburg on December 10–11, 2019. (Picture: Olga Bogdanova)

the way from business planning and product development to building international networks, its primary purpose being to help entrepreneurs realise their dreams. Creve operates in all parts of Finland and also has international partners (Mäntykivi 2020). Understanding the motivation, expertise, and resources of the partners created a foundation for the development of value proposition for the cooperating culture and tourism organisations.

Building trust between the educational institutions was of critical importance at the first stage of the project at the end of 2019 and the beginning of 2020. Building trust happens overtime through joint decision-making (Müller-Seitz 2012). The action plans regarding the objectives were discussed together with project partners, and

their experience and know-how were taken into account when making decisions regarding the concrete actions. Meetings in St Petersburg of representatives of LAB, Humak and ICP, free brainstorming sessions, as well as joint participation in St Petersburg International Cultural Forum, Creative Industries Hackathon “Hack the future” and CBC Annual Event helped to create a shared vision.

Collaboration with the culture and tourism organisations

A better understanding of the motivation and potential barriers for cooperation from the industry side was needed to align the organisational and project objectives, resources with the expectations of the companies and organisations. For the industry, the potential motivation for university-indus-



Pictures 3 (left), 4 (right). Presentation of the project and workshop organised on March 4, 2020, in Lappeenranta. (Picture: Olga Bogdanova)

try cooperation could include, for example, establishing a competitive advantage, access to resources (knowledge, technology, equipment), access to qualified labour, lower R&D costs, and positive impact on the image of the firm (Seppo & Roolaht 2012, 232). The extensive networks of Humak and LAB in culture and tourism made it possible to find valuable partners for collaboration. Cooperating organisations in South Karelia and St Petersburg were selected based on their interest and potential for cross-border cooperation. The main criteria for selection defined by the project team was a strong motivation for collaboration.

Through the series of the initial discussions with the culture and tourism organisations in South Karelia, the project team found that the target group had many ideas for the new international products, but also lacked resources (personnel and financial) for their implementation. Some of the companies have had previous experience of the

university-industry collaboration and were sceptical about the value the project can deliver to their organisations. Other companies had already been involved in other projects and were questioning what specific advantages the project could bring to them. The crucial question that the project team faced was: how to convince the culture and tourism organisations to cooperate? Answering this question and making a value proposition required an understanding of the pains and gains of the organisations (Osterwalder et al. 2014). This analysis was performed in two steps: individual meetings with the companies and organisations and holding an info-session and a workshop in Lappeenranta in March 2020.

During the individual meetings, the participants were offered various forms of cooperation that were benchmarked from the literature on university-industry collaboration, the best practices of the RDI at LAB and Humak, and participation in the rele-

vant discussions. Some of the discussions provided a deep understanding of the motivation to participate. Juha-Pekka Natunen from Kulttuuritila Nuijamies, an event venue in the centre of Lappeenranta, mentioned a unique opportunity to build networks in St Petersburg and to invite Russian musicians to perform at Nuijamies: "We joined EDUCRO because we believe that it has potential. For us, the vital thing is cross-border cooperation with different cultural actors and operators. The project also enables new audiences and maybe even tours with Russian partners". Katri Lätt, the Black and White Theatre Festival, observed that their team would like to use the help of the project in organising their visit to St Petersburg. She was also interested in cooperation with the master students to find out how the theatre festival can move to the next financial level.

During the workshop organised on March 4, 2020 in Lappeenranta, the participants were encouraged to think about the current challenges, an ideal state of the situation that could be achieved with the help of the project, and expectations from the project. Overall the problems the project participants faced were the following: the lack of resources, changes in the travel industry, and changes and diversity in consumers' needs as well as intense competition. The perceived gains were mainly related to the understanding of new trends and customer needs, and the possibility of co-creation through cooperation.

Based on the individual discussions and workshop results, the following motivations were identified and used as a direction for the cooperation:

VALUE PROPOSITION

- International networking, exchange of ideas.
- Professional training: getting knowledge that will improve the competitiveness
- Joint new international products development
- Getting funding for the new projects
- Internationalisation and growth
- Employment/internship/summer work of the students
- Applied research (Theses) on the topic/challenge of the organisation

CHALLENGES

- Lack of resources – a need for extra hands
- Lack of funding
- Variety of digital tools – how to use them?
- Changes in the travel industry
- Changes in consumers' needs and behaviours
- Intense competition
- Challenges related to Corona-outbreak

GAINS

- Understanding the future trends and a need for change
- New contacts
- New ideas
- Developing new international products
- Understanding the needs of the customers, including the younger generation
- Attracting new customer segments
- Co-creation with customers
- Co-innovation with students
- Enhanced dialogue between organisations

Table 1. Analysis of the motivation for university-industry cooperation. (Table: Olga Bogdanova)

Analysing the educational needs

The core part of the project is the development of the professional training programme for the culture and tourism managers. Development of the programme requires an understanding of the educational needs both in St Petersburg and South Karelia and bringing this understanding to the cross-border level.

According to the Decree of St Petersburg Government (2014), St Petersburg's cultural heritage and the cultural potential are among the city's essential resources, which makes it attractive for the Russian and foreign public. St Petersburg's culture is destined to become the foundation of a socially and economically developed city and the centre of the material and spiritual well-being of its people. Numerous visitors from Russian cities and foreign countries come to St Petersburg to become familiar with its cultural heritage and to attend cultural events.

Moreover, St Petersburg's cultural property is a crucial economic resource that provides an environment for tourism development. Therefore, promoting the dynamic development of tourism is one of the culture's current objectives. Indeed, the significance of cultural events is difficult to overestimate. Festivals, contests, exhibits, and performances stimulate interest in the region that hosts them and attract visitors from all over the world.

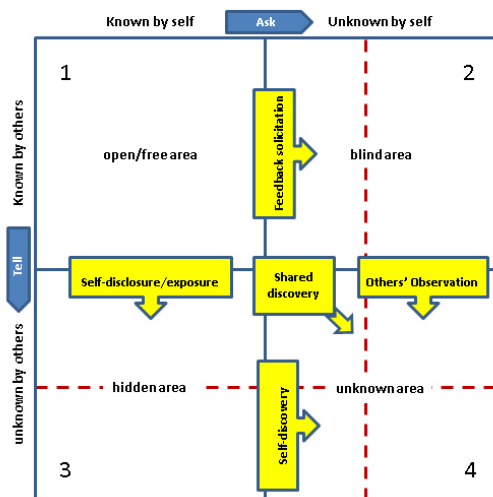
The Institute for Cultural Programmes accumulates information on the city's culture and is developing a publishing system that demonstrates the diversity of St Petersburg's cultural life (Institute for Cultural Programmes 2020). Having information about

the field of St Petersburg culture, the ICP received a unique opportunity to study and analyse the processes and use the results of examinations for different cases. For example, such work assists in the identification of the professional needs of St Petersburg cultural managers. It is necessary both to ensure that the most culturally sophisticated services are available and to increase accessibility to information about St Petersburg culture. A high level of services dictates high standards of qualifications of employees in the cultural sphere.

A preliminary understanding of the educational needs in South Karelia was initially developed from the extensive experience and networks of Humak. Some hints about the educational needs were also collected during the workshop in March 2020 and via individual discussions. Respondents mentioned that they would like to learn more about future trends and customer needs and improve some practical skills, such as international networking, digital literacy, and fundraising. However, some educational needs might not have been easily identified by the respondents. To plan the educational needs assessment, the Johari Window was utilised. The Johari Window is a useful psychological tool that helps to identify the areas of self-awareness (Luft & Ingham 1961), which has been previously applied as a framework for the course curriculum development (Cassidy 2014).

The development of the training programme is aimed at helping the companies and organisations to expand their "open areas" and make them aware of their other areas. One of the methodologies that allow us

Johari Window model



Picture 6. The Johari window as used for the course curriculum development. (SelfAwareness 2020)

to analyse the “hidden” educational and developmental needs of the organisations is DACUM or developing a curriculum methodology. This methodology has been already successfully applied by LAB before in The ES-LogC project (Kotonen et al. 2015), and with the help of this experience and expertise, the DACUM workshop was organised on April 30, 2020, using online platforms Zoom and Padlet. The focus group consisting of six representatives of culture organisations involved in event management, discussed their competences and areas for improvement. Based on the results of the workshop, the project

team has created a competence chart and the areas of future development.

The main competence areas discussed during the workshop included: international marketing, networking and stakeholder management, event production, fundraising, and general management and personal job-related competences. The main areas for future development identified were quite diverse, but at the same time, relevant to the majority of the respondents. Cross-border cooperation requires an understanding of different work cultures, St Petersburg networks of cultural actors, and rules and practices related to border formalities. Many organisations are interested in acquiring international communication skills and be able to plan and implement marketing and sales strategy for the Russian market. Other skills were related to digital literacy improvement: digital marketing, use of digital sales and marketing channels, and exploring digital opportunities. And finally, the participants were interested to learn and implement tools of storytelling, service design, fundraising in changing situations, personal communication, crisis management, and cultural tourism product development.

Some lessons learned from Corona times

The coronavirus outbreak has affected the project in many ways. The meeting in Lappeenranta in early spring 2020 aimed at developing relationships between the collaborating organisations in South Karelia and St Petersburg, and the creation of the joint development plans for the cooperating companies has been rescheduled. Even though

the project plan collided with the coronavirus pandemic and subsequent lockdown and borders closing, the partners decided to continue project activities online. In addition to causing challenges to the project, the crisis has also revealed the fragility of the business models of the partner organisations from the culture and tourism sector, as well as their creativity in coping with this situation. This creativity, cooperation with the other LAB projects operating in the area of culture and tourism, and openness of the project stakeholders for collaboration allowed them to organise an online event, which involved five LAB projects, six educational institutions, and four companies.

During the panel discussion held on May 29, 2020, the companies shared their experiences of survival within unexpected circumstances. When the coronavirus situation began, Kulttuuritila Nuijamies organised an online streaming event, which attracted an audience of 5000 viewers and raised 13 000 euros in donations. Another direction of their work was selling innovation services and projects. Juha-Pekka Natunen underlined that the coronavirus crisis revealed the role of social media and cooperation, including international (Bogdanova 2020). Anna Viikuna from Kaakon Taide said that they were focusing on the ongoing projects, which they started before the outbreak and cut down, and found that it was a wise decision. During the epidemic, they started online tours and noted that it became easier to involve people online. Also, she has aimed at cooperation with the educational system and improving the city for the citizens and tourists and thinks that creativity is one of the essen-

tial skills for coping with uncertain situations.

Digital cultural products were launched widely as a possible way to keep on cultural organisations' activities. So did the St. Petersburg museums, art centres, and places for art, moving the focus of work with the audience online. Musicians and theatres started to stream performances online to make up for the fact that live performances have been cancelled or postponed. The researchers from the Laboratory of Cultural Economics, Higher School of Economics, St Petersburg branch, - Valery Gordin, Head of the Laboratory of Cultural Economics, and researchers Irina Sizova and Anna Kudelkina – shared the results of the detailed analysis of Russian museums' work during the coronavirus pandemic and drew attention to the activity and demand for virtual museum services. Museums started to more actively use online formats for several undertakings: virtual excursions, gamification, workshops, educational routes, and lectures. The museums' community supports actively new formats of work related to the performances of art workers and scientists: inviting famous speakers who are experts in their field, running open lectures, or participating in special events.

Anastasia Knyazeva, project manager from Dostoevsky Museum in St. Petersburg, noted that while it was challenging to start remote work and go online, the crisis became an opportunity for education and development of the future possibilities (Panel discussion Culture and Tourism: Life in "The New Normal", 2020). The Museum improved their digital services, such as online guided tours and other virtual projects on the Museum's official website and pages in social

media, and took time to prepare events for Dostoevsky Bicentennial in 2021, which will be organised in cooperation with the foreign colleagues in France and Finland. During the outbreak, the museum personnel participated in distance learning courses, attended webinars, tutorials, and online workshops. A Museum of nonconformist art "Pushkinskaya-10" instead concentrated on the current opportunities and launched a series of online concerts and a Virtual studio, which turned out to be quite a successful initiative.

The coronavirus pandemic revealed the fundamental skills necessary for survival and future directions of development: creativity, agile approach, collaboration across sectors and borders, and digitalisation. These insights brought new visions regarding the planned educational programme.

Adapting educational and developmental models from the best practices

The development of the model of a professional training programme for the industry professionals was a joint effort of the partners. The process of building the content outline involved the adaptation of the best practices. Adaptation of the method is not a simple transfer from one context to another; it requires customisation and hybridisation of the benchmark. The target audiences of the project are quite different; they are limited in resources, including time, educated and experienced, and are interested in the concrete (in many cases, monetary) results. The training and cooperation programme outline has been developed in successive brainstorming sessions between LAB, ICP, and Humak,

which included selecting the topics of the modules based on the educational needs of the companies and expertise of the project team, defining the structure and duration of the modules and evaluation of the demand for external experts and services (speakers, coaches, and experts).

The lessons learned from Creve and practices of the LAB Experimental Developmental Ecosystem laid the foundation of the structure of the modules. The main lesson learned from the Creve accelerator programme was that, for participants, it is not enough to learn about new processes, tools, and theories. The main goal in participating in the educational events was to apply the acquired knowledge on the concrete level, in their everyday working life. This problem was tackled by organising mentoring sessions during the programme with the mentors who could see where the challenges are in business and how and when those need to be solved. LAB's contribution to the structure and methodology of the programme included planning the joint crowdsourcing sessions with bachelor students and planning the cases and experiments to apply the new knowledge during the programme.

The fundamental goal of the EDUCRO training programme, therefore, is twofold: to construct a network for future interaction and to lay the groundwork for long term collaboration between cultural managers working and creative entrepreneurs from St Petersburg and Finland. At the beginning of the programme, participants will create cooperation teams and develop individual development plans. The personal developmental plan – is an initial idea about creating a new



Picture 7 (left). Seminar “New Reality – new Opportunities” in Saint Petersburg. (Picture: Institute for Cultural Programs)



Picture 8 (right). Online Festival and Event Management Masterclass by Paul Gudgin in Zoom on September 7, 2020. (Picture: Olga Bogdanova)

international service, which will be elaborated throughout the training programme. In parallel, the companies will introduce their ideas or challenges to the LAB bachelor students specialising in marketing, tourism, and arts during the innovation sessions. The best multidisciplinary teams will have an opportunity to cooperate with the companies during the training programme, jointly apply for funding, and get employed. At the same time, the co-creation with the students will be performed via commissioned research on the topics of internationalisation, growth, marketing strategies, and marketing studies. The potential themes have been collected during spring 2020 from the companies, and some cooperation has already begun.

On August 21, 2020, the ICP has launched the series of seminars “New Reality – new Opportunities. Development of Cross-border Cooperation and Innovative Projects in Culture and Tourism”. The series of seminars is

supported financially by the St. Petersburg Committee for Culture. The programme of the seminars offers meetings with experts, workshops, discussions, and study visits. The participants for the training programme are St Petersburg cultural managers, representatives of the creative industries sector, festival managers who successfully pass the competitive selection. Within the training programme, the ICP keeps to boost cross-border cooperation in culture and tourism between St. Petersburg and Finland and to make a basis for partnerships and working alliances. Potential partnerships and collaborations will be the result of the training programmes and the EDUCRO project as well.

The training programme in Finland started on September 7, 2020, with the Online Festival and Event Management Masterclass by the recognised expert Paul Gudgin. The programme will consist of six practically oriented modules based on the analysis of the

needs and adaptation of the best practices. The modules are arranged in successive order, helping the companies to proceed with the new product development. The themes of the modules include event production; forecasting future trends: values, digitality, experience production; creativity, service design, and digital innovations; international communication and networking; branding, brand cooperation, and marketing; financial management and fundraising. Each module will consist of the two-day seminar, with the latest know-how from the invited lecturers, including experts from St. Petersburg, on the first day, and application of the knowledge using methods and tools in concrete cases with the project team during the second day. In between the session, the participants will receive support through individ-

ual mentoring sessions.

By May 2021, it is planned that the companies and the students will finalise their work and will meet during the Summer Camps in St. Petersburg and South Karelia. These sessions will help to complete the ideas, prepare for the funding application rounds during the final module on fundraising in August 2021, and apply for grants in September 2021. Overall, the training programme is planned to result in the creation of the new international culture and tourism products in close cooperation on the cross-border level between the educational partners, students, and pilot group of the cooperating companies. The best practices and the educational cooperation methods are planned to be integrated and disseminated at the international culture-related events.



References

Awasthy, R., Flint, S., Sankarnarayana, R. & Jones, R.L. 2020. A framework to improve university-industry collaboration. *Journal of Industry-University Collaboration*. 2(1), 49-62. [Cited 17 July 2020]. Available at: <https://doi.org/10.1108/JIUC-09-2019-0016>

Bogdanova, O. 2020. Culture and Tourism: Life in “The New Normal”. [Cited 17 July 2020]. Available at: <https://blogit.lab.fi/labfocus/en/culture-and-tourism-life-in-the-new-normal/>

Cassidy, T.M. 2014. Opening the window to lifelong learning: Applying the Johari Window framework in engineering communication curriculum. Oct 2014, *IEEE*, 1-4. [Cited 17 July 2020]. Available at: <https://ieeexplore.ieee.org/document/7020391>

Decree of the Government of St. Petersburg. 2014. No. 488 “About State Program of St. Petersburg “Development of Culture and Tourism in St. Petersburg” for the period 2015-2020, dated June 17, 2014, with corrections by November 9, 2016, p. 7. [Cited 30 June 2020]. Available at: <https://spbculture.ru/ru/dokumenty/gosudarstvennaya/>

Institute for Cultural Programmes. 2020. Information center. [Cited 30 June 2020]. Available at: <https://spbicp.ru/content3>

Juvonen, P. & Kurvinen, A. 2018. A Perfect Ecosystem for Learning? Modern Thoughts for Organizing Higher Education. *Advances in Science, Technology and Engineering Systems Journal*. 3(1), 82-93. [Cited 17 July 2020]. Available at: <http://dx.doi.org/10.25046/aj030110>

Kotonen, U., Tuominen, U., Maksimainen, A. & Kuusisto, M. 2015. Experiences from Healthcare Logistician Education. *Journal of Modern Education Review*. 5(8), 765-777. [Cited 17 July 2020]. Available at: [https://dx.doi.org/10.15341/jimer\(2155-7993\)/08.05.2015/005](https://dx.doi.org/10.15341/jimer(2155-7993)/08.05.2015/005)

Luft, J. & Ingham, H. 1961. The Johari window. *Human relations training news*. 5(1), 6-7. [Cited 17 July 2020]. Available at: <http://www.richerexperiences.com/wp-content/uploads/2014/02/Johari-Window.pdf>

Mäntykivi, J. 2020: Creve helps entrepreneurs in the creative industries thrive. [Cited 25 Aug 2020]. Available at: <https://www.humak.fi/en/uutiset/creve-helps-entrepreneurs-in-the-creative-industries-thrive/>

Müller-Seitz, G. 2012. Leadership in Interorganizational Networks: A Literature Review and Suggestions for Future Research. *International Journal of Management Reviews*. 14(4), 428-443. [Cited 17 July 2020]. Available at: <https://doi.org/10.1111/j.1468-2370.2011.00324.x>

Osterwalder, A., Pigneur, Y., Bernarda, G. & Smith, A. 2014. *Value proposition design: How to create products and services customers want*. Hoboken: John Wiley & Sons.

Panel discussion Culture and Tourism: Life in “The New Normal”. 2020. [Cited 17 July 2020]. Available at: <https://educro.org/culture-and-tourism-life-in-the-new-normal/>

SelfAwareness. 2020. The Johari window as used for the course curriculum development. [Cited 24 Sep 2020]. Available at: <https://www.selfawareness.org.uk/news/understanding-the-johari-window-model> \ “~:text=A%20Johari%20window%20is%20a,improving%20communications

Seppo, Marge and Lilles, Alo, Indicators Measuring University-Industry Cooperation (2012). *Discussions on Estonian Economic Policy*, Vol. 20, Issue 1, p. 204, January 2012. [Cited 17 July 2020] Available at SSRN: <https://ssrn.com/abstract=2194394>

Wilson, E.A. 2012. Faculty Perceptions of Success in Cross-Border University-to-University Partnerships. [Cited 17 July 2020]. Available at: https://conservancy.umn.edu/bitstream/handle/11299/130391/1/Wilson_umn_0130E_12664.pdf

Pictures

Picture 6. SelfAwareness. 2020. The Johari window as used for the course curriculum development. [Cited 24 Sep 2020]. Available at: <https://www.selfawareness.org.uk/news/understanding-the-johari-window-model>

Annukka Heinonen, Kaisa Kurkela & Lotta-Maria Sinervo

Piloting participatory budgeting “PB” – how to get the citizen perspective across?

EMPOWERING PARTICIPATORY BUDGETING IN THE BALTIC SEA REGION	
Project period	1.1.2019 – 31.12.2021
Funding	Interreg Baltic Sea Region   EUROPEAN REGIONAL DEVELOPMENT FUND
LAB's role	Partner 
Project website	www.lab.fi/empaci and www.empaci.eu

Summary

Participatory budgeting, the nowadays widely used tool of democracy, is firmly based on the notion of co-operation and equality. At least, it should be. Ways and means of implementation vary on a case to case basis, as municipalities with limited resources experiment with these modern tools to benefit inhabitants and improve processes. Support is available through networks working on these common goals.

This article discusses the process of a Finnish municipality, The City of Lahti – and the ways equality is addressed in it. Lahti is a pilot municipality in the EmPaci – Empowering Participatory Budgeting in the Baltic Sea Region – an EU Interreg program funded project working to increase and spread knowledge and information about participatory budgeting among inhabitants, NGOs and municipalities alike. The Finnish partners – LAB University of Applied Sciences (LAB) and Tampere University (TAU) support the participatory budgeting pilot in close co-operation with Lahti. The Finnish Association of Local and Regional Authorities also supports the project.



Picture 1. Participatory budgeting is a joint effort where municipalities, inhabitants and other stakeholders come together like at the OmaLahti PB co-creation “Lackathon” event in August 2020. (Picture: Lotta-Maria Sinervo)

Setting up PB is a joint effort

Society and municipalities are changing - modern citizens call for ways to participate beyond taking part in the traditional political party system and voting in elections. Municipal spending has a remarkable influence on us all. Municipal finances and how they are managed set a tone for the type and quality of services we, the citizens, receive. Many of

us wish things were different but hesitate to act – some are more active in participating in joint matters than others but each of us has a unique voice and a message of equal value.

Municipalities, local hubs for community, as well as the nearest service point between citizens and the state, are responsible for many of our necessary day-to-day services and hold a key role in this dilemma.

Establishing a good rapport requires work, as municipalities are often perceived as bureaucratic and distant entities to be reviewed from a far distance. This means that only a fraction of voices gets heard in the traditional representative democratic decision-making processes. From a democracy point of view, this should not be the case and modern methods of making participation easier have arisen over the years.

To tackle this issue, participatory budgeting (PB) where inhabitants get a chance to have their say in how part of municipal finances are handled, has become a popular way over past years in an attempt to boost traditional democratic endeavours such as voting in elections both internationally and in Finland. This presents municipalities often operating on limited resources with new challenges as reaching inhabitants requires a lot of resources in terms of both funding and work related to the process.

Citizen participation and PB are much studied, both in Finland and internationally. However, there seems to be only limited research that has conducted a citizen survey concerning attitudes about participatory budgeting. This raises the question whether we have adequate information of the wants and needs of the citizens. To provide new information from this point of view through an extensive citizen survey and help municipalities become aware of this method and take full advantage of it, the EU Interreg program funded EmPaci – Empowering Participatory Budgeting in the Baltic Sea Region project focuses on spreading knowledge about PB to municipalities in the region. The aim of the project is to increase knowledge, support

implementation and provide a network for municipalities so that they can take on this modern take on democracy and strengthen their connection with their inhabitants. Inhabitants, municipalities, and local councils as well as other stake holders such as NGOs are at the core of development in all partner countries as there are pilot cases running with municipalities in all project countries at the moment to test PB in a pilot run.

Participation at the Core of PB

PB is a process inviting citizens to participate in municipal resources allocation (see e.g. Salminen et al. 2016) In practice, it can be seen as a tool for municipalities to reach citizens and gain focal information (Pihlaja 2017, 4). PB can be seen and implemented in many ways but the main principle remains the same – the possibility for the citizens to make decisions about the use of money.

PB's origins lie in the late 80s in Porto Alegre in Brazil, where it was used to fight social injustice (see e.g. Wampler 2008.). Forms of direct democracy, such as PB, can be seen as a supplement to the traditional representative democracy. Thus, participation is at the core of PB. The processes offer different options for promoting participation, getting citizens involved from the very beginning of a PB process to submitting ideas, co-creating them into proposals and voting on those to be implemented. PB processes often contain different methods of participation, for example internet-based participation in phases of idea creation and voting or face to face co-creation with citizens and civil servants.

Participation challenges municipalities and municipal organisations. Participation

requires vertical and horizontal support and favourable attitudes in organisations. Often the PB processes are seen as local flagship projects in the field of participation. In reality, they are often a mosaic of different methods of participation. PB can be seen as an important tool for developing a more open and democratic municipal organisation (see e.g. Wampler 2008).

Overall citizen participation is useful from the viewpoint of education and learning inside and outside municipal organisations. Citizens can provide local civil servants vital information, for example on every-day life issues. Also, citizens can learn about the work of local government. Therefore, PB is a possibility to educate citizens about public sector issues helping citizens to enhance their active citizenship skills. Participation enables citizens to take a part in processes from which they have traditionally been excluded, presenting them possibilities to persuade public officials about locally important issues. Well-organised participation can even build more trust towards government works. However, there are several challenges concerning participation. It is time-consuming and requires knowhow and resources. Poorly designed participation processes can backfire and even create more hostility towards municipality administration. (Irvin & Stansbury 2004; Arnstein 1969.)

Nowadays PB is globally used. In recent years it has sparked wide interest in Finnish local government. Almost a third of Finnish municipalities have at least investigated or experimented with this method to connect more deeply with their inhabitants (Kurikka 2020). There are mainly four models of PB

used in Finland: *Porto Alegre, Grant based and Percentage of Budget models, or the Pools method*. In the **Porto Alegre** model – such as the model used in the Lahti pilot case - the funding comes from municipality's annual budget and the municipality acts as a facilitator that helps inhabitants to run the PB process. In a **Grant** based scheme, PB is seen as a project with a lump sum funding. **Percentage of Budget** refers to typically very small percentages of the municipality's budget, over which the inhabitants have free reign. **Pooling** means that funding for PB is gathered from different sources that have a stake in a certain scheme. (Pihlaja 2017; Aho-nen & Rask 2019.)

Even though direct participation and PB are gaining popularity in Finland, seldom do municipalities ask their citizens' views on PB. As a rare example, the City of Vantaa conducted a survey of its citizens of the theme of citizen participation (City of Vantaa 2020).

Many of the Finnish PB pilots are quite well studied. For example, Rask, Ertiö, Aho-nen, Vase and Tuominen (2019) have evaluated the PB process in Helsinki (OmaStadi). Often research is focused on the process and outcomes of a particular PB. In the EmPaci-project with the City of Lahti, PB was started with a survey addressed to citizens. Through the survey we gained in-depth information on citizens' current views and preferences concerning participation in general and PB. The same survey will be conducted in other EmPaci partner municipalities - Bützow, Germany; Rietavas, Lithuania; Vidzemes Planning Region, Latvia; Telšiai District Municipality Administration, Lithuania; Municipalities of St Petersburg, Russia

- making international comparison possible.

PB requires a lot from the municipality. It is a multifaceted tool which challenges the traditional roles of not only inhabitants but also municipalities and redistributes power among all groups (Torfing et al. 2019; Sinkkonen 2018). In addition, participation calls for active citizens as opposed to passive customers (see e.g. Sinkkonen 2018; Torfing et al. 2019). Therefore, more studies concerning PB are called for to recognise development needs, support quality and relevance of the functions and to bring out the benefits and costs of PB. Attention should be paid to structural implications of PB. (Rask & Ertiö 2019.)

PB as a question of equality

Even though the idea behind PB is to be a non-discriminatory method where everyone has a voice, the situation can be polarised: Those who are active in other fields are active in PB. They have the ways and means to further their goals whereas less active inhabitants get left behind. (City of Tampere 2015; Rask et al. 2019.)

In the Baltic Sea context of the EmPaci-project, the stereotype of an individual taking part in participatory budgeting is male, politically active, well-educated, and 35-65 years old (EmPaci 2019a). One of the key issues in the EmPaci-project is to provide information and support to three specific groups of inhabitants that are often found difficult to reach: the elderly, the unemployed and youth. Each partner municipality also identifies and tailors specific actions to inhabitants that are locally hard to reach. (EmPaci 2018; EmPaci 2019a.)

Although the nature of PB is evolving, there is still a lot of work to be done to reach the targeted level of participation in many municipalities. From a quality viewpoint, there are many things to be considered when planning and running a municipal PB. This means that municipalities must take extra care in making sure they implement their PBs in ways that make it possible for different types of individuals to be heard, for example by hearing citizens on their wishes concerning channels of participation.

This article discusses these issues by introducing the process behind [a PB pilot](#) currently running in the City of Lahti since spring 2020, as well as drawing from the results of a citizen survey conducted by the Finnish EmPaci partners in late 2019 in Lahti. (Kurkela et al. 2019.)

Building Knowledge Through a Citizen Survey in a Lahti PB pilot “OmaLahti”

As there is no ready-made model of running a PB, the means and methods of participation vary between pilots and municipalities. This also means that the available data varies. The aim is to conduct PB systematically to enable research and development as well as ensure process quality. The first step of building a PB process for Lahti was a citizen survey to map out the wants and needs of the citizens regarding participation. All partner municipalities of EmPaci from the six countries carried out an almost identical survey. (EmPaci 2019b.) In Lahti, the survey consisted of a common part that was used in all EmPaci partner municipalities as well as a tailored part that focused on the local issues.

The aim of the surveys was to illustrate the current state of PB in their respective municipalities. In addition to background questions, the questionnaire included four parts. First part included participation and societal issues in general. Second and third parts consisted of questions on attitudes on hometown and PB. The fourth part included questions specially targeted to citizens of Lahti. From the 15th to 31st October 2019, 975 respondents answered the online survey. In addition, about 1000 paper sheets were sent to citizens with random sampling. All together 1213 respondents answered the survey. See respondent background variables in Table 1.

Based on the results of the survey, the respondents seem to be quite active in voting in elections; 82 % percent have voted in the last municipal elections. More precisely, 40 % of the respondents are interested or very interested in local politics. There is some difference between men and women: 51,6 % of male respondents find local politics interesting while the comparable percentage among female respondents is 35 %. The same comparison was made between different age groups. Age groups 56-65 (50,2 %) and 66-75 (53 %) respondents seem to be most interested in local politics. The least interested group is respondents under 25 years (17,3 %).

Gender (N=1209)	N	%	Current activity status (N=1213)		
Female	904	74,8 %	Employed	580	47,8 %
Male	285	23,6 %	Self-employed	46	3,8 %
Other	2	0,2 %	Unemployed, between jobs (less than 3 months)	23	1,9 %
I don't want to answer	18	1,5 %	Long-term unemployed	78	6,4 %
			Retired	313	25,8 %
			Studying/Learning (not economically active)	96	7,9 %
Marital status (N= 1211)			Homemakers	25	2,1 %
Single	279	23,0 %	Others	52	4,3 %
Living with a partner	204	16,8 %			
Married/ Registered partnership	505	41,7 %			
Divorced/Separated	178	14,7 %	Age (N=1197)		
Widowed	45	3,7 %	0-18	42	3,5 %
			19-25	62	5,2 %
			26-35	164	13,7 %
Highest Level of education (N=1212)			36-45	257	21,5 %
No educational level	8	0,7 %	46-55	233	19,5 %
Primary education	122	10,1 %	56-65	220	18,4 %
General Certificate of Secondary Education	422	34,8 %	66-75	188	15,7 %
High school level	122	10,1 %	76-85	27	2,3 %
Bachelor's degree (University or University of Applied Sciences)	316	26,1 %	86-	4	0,3 %
Master's degree (University or University of Applied Sciences)	190	15,7 %			
Doctoral degree	7	0,6 %			
Other degree	25	2,1 %			

Table 1. Background variables of the respondents

The most interesting form of engagement seems to be participating in neighbourhood initiatives, volunteering, and supporting local council's projects and collaboration with city organisations. Protesting is the least interesting form of participation. (diagram 1). There are differences between two sexes: wom-

en seem to be more interested in volunteering (42,10 %) than men (19 %) whereas men are more interested in institutional methods such as supporting local council's projects (men 43,30 %, women 27,90 %) or collaboration with city organisations (men 36,60 %, women 28,10 %).

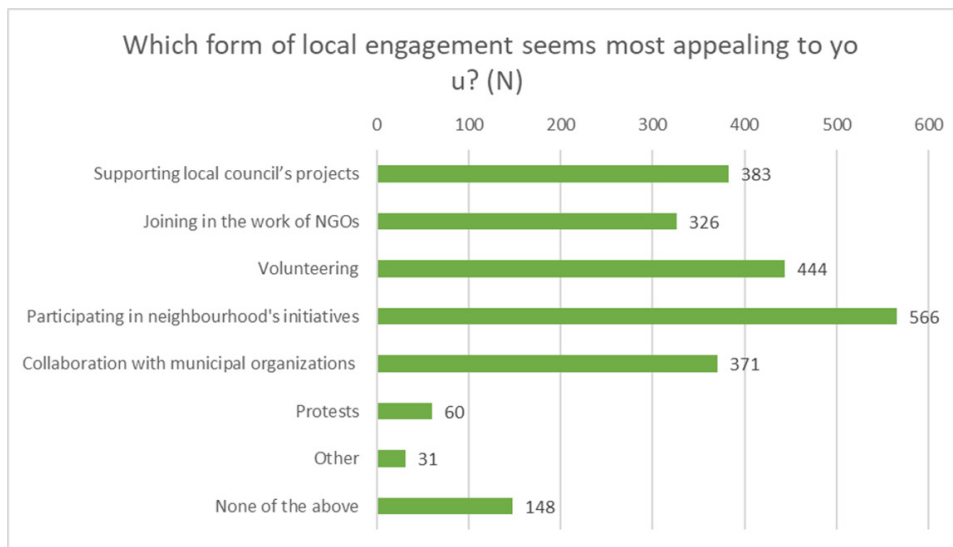


Diagram 1. Forms of local engagement (respondents were able to choose multiple options, number of respondents= 1208, number of responses=2329)

Based on the survey results, it seems that PB is not very well-known in Lahti, only 33,7 % of the respondents are familiar with it. However, 72 % of the respondents are interested in experimenting with PB in Lahti. Respondents aged 26-35 are keenest on experiment-

ing with PB (79,30 %) whereas least interested are respondents over the age 76 (58,50 %). When compared to other methods of participation, there is a fairly strong interest towards PB. Voting in elections and PB are the most interesting methods of participation.

(diagram 2) There is also strong support for conducting PB on an internet-based platform. Only the oldest age group is reserved towards it (47,2 % of them sees it as option). There is no big urge for face-to-face meet-

ings. The most reserved group is the youngest group (under 25), with only 13,4 % finding face-to-face meetings a good option. The most positive group is 56-65, with 19,1 % supporting the idea of face-to-face meetings.

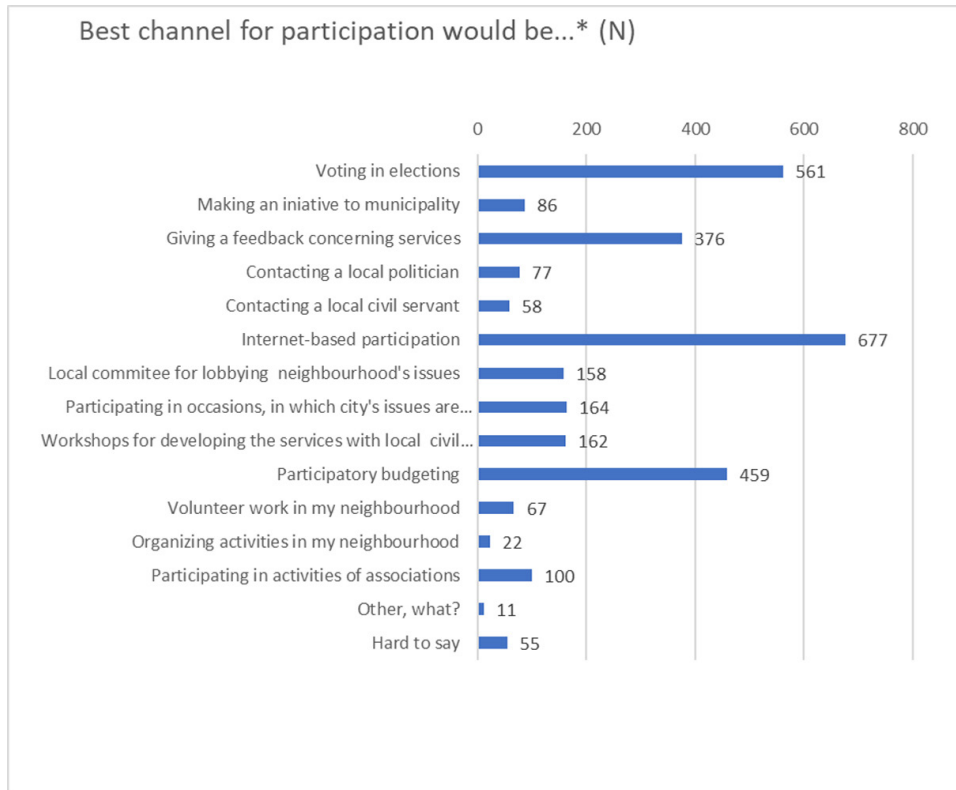


Diagram 2. Best channels of participation (Respondents were able to choose max three options, number of respondents= 1207, Number of responses = 3033)

As for the themes of PB, health services, social services and issues of education seem to be most appealing to the respondents in general. (Diagram 3) There are some differences between men and women. For women, themes such as healthcare (74 %) and social affairs (57 %) as well as education (49 %) are important. For men these are important together with sport services (45 %) and urban planning (45 %). It is noteworthy that in Lahti most of the health and social care services are under the authority of a joint mu-

nicipal board and are not under the jurisdiction of the City of Lahti. The familiarity of the services seems to have at least some influence on responses with differences between age groups. For respondents under 25 years, issues of education are the most important theme (65,30 % see it as good theme for PB) whereas education is remarkably less important for older people. For all other age groups, the most important theme seems to be healthcare issues. For the oldest age group 91,70 % see it as an important theme.

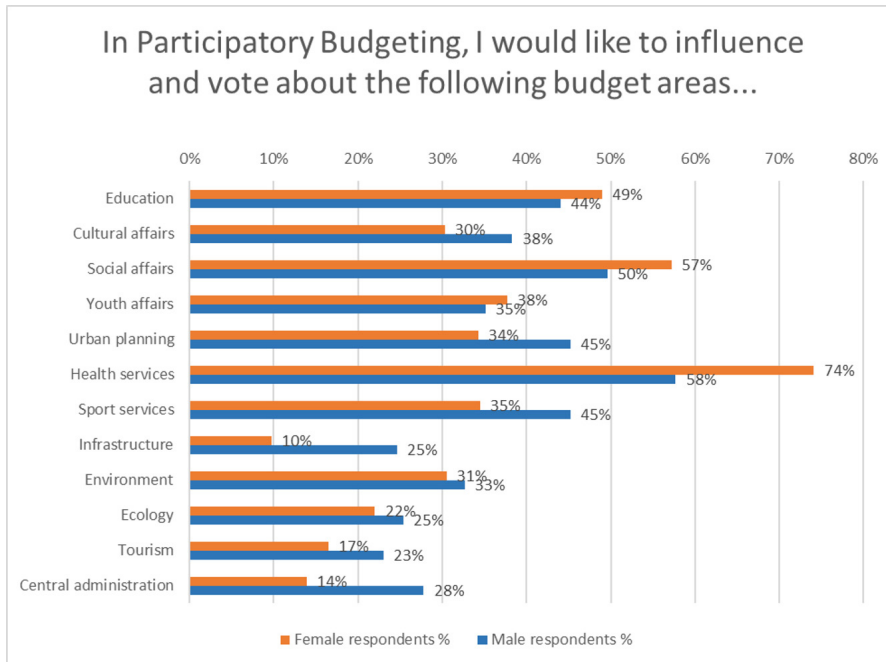


Diagram 3. Themes of PB (Respondents were able to choose multiple options, all together respondents 1117, responses 4788)

This survey did reach a fairly good number of respondents (n=1213) in Lahti. Therefore, it provides important signals from the citizens. Overall, the results show that institutional forms, for example voting in elections, are still very important tools for taking part in local issues. However, alongside PB and internet-based participation are appealing. There is clearly a lot of interest in acting in cooperation with city organisation in Lahti. This seems to be a good soil for online PB processes for example, collecting ideas, voting and, why not even for a collaboration and co-creation between city and citizens?

The survey illustrates a strong interest in experimenting with PB in Lahti comparing against the survey conducted in Vantaa (City of Vantaa 2020), where only 10 % of the respondents found PB an appealing channel of participation. In Vantaa, 40 % found it at least to some extent as an influential channel of participation. The fruitful soil for PB in Lahti is worth noticing.

However, some groups were represented in the responses better than others, which may influence the results. For example, women were more active in answering the survey in general (74,8 % of the respondents). Also, when looking at the different age groups, the response rate was very low in the oldest age groups (over 76 years 2,6%) and in the youngest age group (under 18, 3,5 %). Also, there are some limitations when conducting a quantitative study. For example, even though with surveys it is possible to gain a large number of responses, the data does not cover the deeper understanding and the viewpoint of participation and correspondingly cannot interpret deeper thoughts, fears

and worries concerning participation. However, both quantitative and qualitative approaches are needed when studying PB and overall participation.

From Feedback to Project Implementation

The knowledge from the citizen survey was utilised as the participation model and PB pilot were developed simultaneously. The survey provided excellent data to support choosing a model and drafting the implementation to benefit the city and the citizens in the best possible way. The City of Lahti has some previous experience in PB through the Nastola Area Board concept as well as an internal current state analysis including an internal survey done in the summer of 2019. Previous experience supplemented survey data to formulate the basis to build a PB pilot on. (Loipponen & Heinonen 2019.)

With all this knowledge, the City of Lahti designed a city level PB pilot in late 2019 on a tight schedule to begin the pilot in spring 2020. The planning process began with setting up the project team and defining a goal in the city. As the director of social and healthcare services Mikko Komulainen, responsible of the PB pilot 2020 states, "The goal of the PB pilot is to strengthen the overall use of participatory methods in city operations and involve inhabitants in developing Lahti". "With PB, we hope to build trust in local government, dialogue and teamwork amongst different groups within the city", concludes Tia Mäkinen, Participation Coordinator, the City of Lahti. (City of Lahti 2020a)

The expertise and current knowledge from the academic partners LAB and TAU

supported the process of choosing a suitable model for the pilot implementation. Several models from area boards and partnership tables to percentage-based and regional PB-models were introduced to the Division of Participation and Wellbeing. Five possible options: Ideas and voting by inhabitants –model, regional project model, project grants, area council model and regional partnership tables were then taken to a wider inspection by city officials that finetuned the models for decision-making. (Mäkinen 2020.)

A regional project model for all citizen groups was chosen to be implemented in this pilot, which was also supported by the citizen survey results. In this model, a lump sum of funding is distributed to individual projects in the Lahti area. The total sum of 100 000 € used for the PB is distributed evenly among Eastern, Southern and Northern areas of Lahti and the whole city. The areas were chosen according to the number of population in each area aiming for spatial equality. The survey results did not highlight specific themes within the authority of the City of Lahti, so multiple choices were given for the OmaLahti pilot PB – three by the City of Lahti: Environment, Community and Wellbeing and a fourth, annual theme: Sports, suggested by inhabitants in an online poll. (City of Lahti 2020b; City of Lahti 2020c.)

In the OmaLahti PB pilot, it was possible to give ideas as well as vote for favourites through online solutions. However, those not wanting to use the Internet were able to vote at the Palvelutori-service point and city libraries. Live events and meeting were planned for the pilot, but cancelled due to the outbreak of COVID-19 just as the pilot-

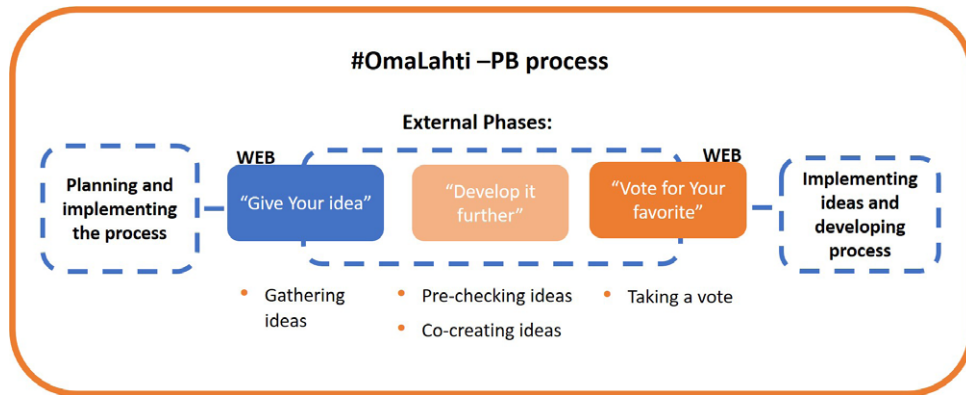
ing was due to begin in the spring.

In Lahti, the PB pilot consisted of three external phases: A) “Give Your idea”, B) “Develop it further” and C) “Vote for Your favourite” and five steps including the internal process (picture 2.). Different web-based systems such as a Webropol-survey, were utilised in idea creating and voting phases.

To strengthen the involvement of citizens, a group of 12 volunteering citizens was invited to act as Project Guardians who could help spread knowledge about the PB pilot in their respective areas. Project Guardians participated throughout the project through their own networks, social media channels and by distributing material to their areas, for example putting up posters. Within the city organisation, four civil servants were appointed as PB Coaches to be responsible for the PB process in their administrative field. Also, all interested parties were invited to join a co-creation event in August 2020. At this Lackathon-event, citizens, NGOs and city officials worked on 14 ideas to turn them into proposals for voting along those ideas that didn't need co-creation and went through to voting directly. The voting took place in September and 3896 citizens voted. After the vote, the results were politically verified, and the implementation of the chosen 10 ideas is just beginning in late 2020 and will continue throughout 2021. (City of Lahti 2020c)

Continuing the Empaci PB journey

The pilot process is ongoing in Lahti but some general conclusions can already be made regarding equality. The citizens of Lahti submitted 713 ideas in the PB pilot in spring 2020 and about 3,3 % of the citizens of



PICTURE 2 The OmaLahti PB process was built in a systematic way by utilising available data such as the results of the citizen survey from 2019. (Picture: Annukka Heinonen)

Lahti voted. A large number of citizens have been reached through this PB process so far. However, the future challenges are connected to the quality of the process, for example, participation of a multifaceted variety of people from different backgrounds and the transparency and interactivity of the process. Dialogue between the city and its citizens throughout the PB process could enhance the quality of the process. The results and outcomes of the PB pilot will show how, in future, these qualitative preconditions will be met. An important part of the PB process is the assessment and evaluation of the PB pilot which will be conducted in co-operation with Finnish EmPaci partners in late 2020. In the evaluation, feedback will be collected from different stakeholders, such as citizens, city organisation and local politicians.

After a second Finnish pilot with the [City of Riihimäki](#) (City of Riihimäki 2020) – a new pilot municipality in EmPaci – is conducted in late 2020 there will be even more knowledge available on the current situation of PB in Finland. Work on these Finnish pilots can be followed on the [Finnish partner site](#). Comparative analysis of the project level results from all partner municipalities will be gathered and distributed through the [project website](#) during 2021. The site and an org. ware system will also offer information for those interested in running a PB or developing a current process.

References

- Arnstein, S. R. 1969. A ladder of citizen participation. *Journal of the American Institute of Planners*. 35(4), 216–224. [Cited 16 Oct 2020]. Available at: <https://doi.org/10.1080/01944366908977225>
- City of Lahti. 2020a. Lahti varaa 100 000 euroa osallistuvan budjetoinnin kokeiluun. [Cited 14 Aug 2020]. Available at: <https://www.lahti.fi/ajankohtaista/uutiset/lahti-varaa-100-000-euroa-osallistuvan-budjetoinnin-kokeiluun>
- City of Lahti. 2020b. Lahti kutsuu asukkaat ideoimaan osallistuvan budjetoinnin hankkeita. [Cited 2 Sept 2020]. Available at: <https://www.lahti.fi/ajankohtaista/uutiset/lahti-kutsuu-asukkaat-ideoimaan-osallistuvan-budjetoinnin-hankkeita>
- City of Lahti. 2020c. Official OmaLahti PB -website. [Cited 2 Sept 2020]. Available at: www.lahti.fi/osbu
- City of Riihimäki. 2020. Osallistuva budjetointi. [Cited 16 Oct 2020]. Available at: <https://www.riihimaki.fi/paatoksenteko/osallistu-ja-vaikuta/osallistuva-budjetointi/>
- City of Tampere. 2015. Osallistuvan budjetoinnin ja palvelumuotoilun pilotointi Tesoman alueen kehittämisessä. [Cited 31 Aug 2020]. Available at: <http://omatesoma.fi/wp-content/uploads/2015/08/Osallistuvan-budjetoinnin-raportti.pdf>
- City of Vantaa. 2020. Vantaalaisten osallisuuden kokemukset ja näkemykset osallistumis- ja vaikuttamismahdollisuuksista. [Cited 18 Aug 2020]. Available at: https://www.vantaa.fi/in-stancedata/prime_product_julkaisu/vantaa/embeds/vantaawwwstructure/151631_Kuntal-aiskyselyn_2020_tulokset_esitys.pdf
- EmPaci 2018. EmPaci_Application_Form. [Cited 23 Aug 2019]. An unpublished pdf-document available at EmPaci-project.
- EmPaci 2019a. Official project website for EmPaci – Empowering Participation in the Baltic Sea Region. [Cited 17 Aug 2020]. Available at: <http://www.empaci.eu/>
- EmPaci 2019b. Questionnaire for citizen survey. [Cited 1 Sept 2020]. An unpublished pdf-document available at EmPaci-project.

Ahonen, V. & Rask, M. 2019. Osallistuvan budjetoinnin mallit ja trendit Suomessa. Kuntaliiton julkaisusarja 2/2019, uutta kunnista. Helsinki. [Cited 13 May 2019]. Available at: <https://www.kuntaliitto.fi/julkaisut/2019/1985-osallistuvan-budjetoinnin-mallit-ja-trendit-suomessa>

Irvin, R. A., & Stansbury, J. 2004. Citizen participation in decision making: Is it worth the effort? *Public Administration Review*. 64(1), 55–65. [Cited 16 Oct 2020]. Available at: <https://doi.org/10.1111/j.1540-6210.2004.00346.x>

Kurikka, P. 2020. EmPaci-hankkeen OSBU-työpaja. Presentation at EmPaci project's 'Train the Trainer' event at LAB University of Applied Sciences in Lahti on February 18th, 2020.

Kurkela, K., Sinervo, L-M., Heinonen, A. & Loipponen, J. 2019. Asukaskysely 2019 – Osallistuminen ja vaikuttaminen Lahdessa – raportti 21.1.2020. [Cited 12 Aug 2020]. Available at: https://www.lab.fi/sites/default/files/2020-01/EmPaci_Asukaskysely2019_osallistuminen%20ja%20vaikuttaminen%20Lahdessa_raportti_2112020.pdf

Loipponen, J. & Heinonen, A. 2019. Having a say! A University of Applied Sciences supporting regional development with municipal participatory budgeting. In: Sallinen N., Kotonen U. (Eds.). *Smart Business Annual Review 2019*. In: Lahden ammattikorkeakoulun julkaisusarja, osa 53, Lahden ammattikorkeakoulu. [Cited 18 Aug 2020]. Available at: <http://urn.fi/URN:ISBN:978-951-827-316-8>

Mäkinen, T. 2020. Lahden kaupungin henkilöstön osallisuustyöpaja vol. 2-presentation 15.1.2020 by Tia Mäkinen, participation co-ordinator at The City of Lahti.

Pihlaja, R. 2017. Osallistuva budjetointi kunnissa ja maakunnissa. Suomen Kuntaliitto. [Cited 31 Aug 2020]. Available at: <https://www.kuntaliitto.fi/julkaisut/2017/1837-osallistuva-budjetointi-kunnissa-ja-maakunnissa>

Rask, M. & Ertiö, T. 2019. Policy Brief: Yhteisluomisen tutka – Malli osallisuustoiminnan kokonaisvaltaiseen arviointiin. 4.6.2019. Helsingin yliopisto. [Cited 12 Jun 2020]. Available at: <https://bibu.fi/policy-brief-yhteisluomisen-tutka-malli-osallisuustoiminnan-kokonaisvaltaiseen-arviointiin/>

Rask, M., Ertiö, T., Ahonen, V., Vase, S. & Tuominen, P., 2019. Helsingin kaupungin osallistuvan budjetoinnin väliarviointi. OmaStadi 2018–2019. BiBu-hanke, Helsingin yliopisto. [Cited 6 Aug 2020]. Available at: https://helda.helsinki.fi/bitstream/handle/10138/308984/OmaStadi_va_liarviointi_FINAL.pdf?sequence=1

Salminen, J., Häikiö, L., & Lehtonen, P. 2016. Osallistuva budjetointi hallinnollisena ja poliittisena käytäntönä. *Hallinnon tutkimus*. 35(1), 60-75.

Sinkkonen, J. 2018. Osallistuva budjetointi demokratiainnovaationa. Tapaustutkimus kolmen kunnan osallistuvan budjetoinnin kokeiluista. Pro Gradu. Tampereen yliopisto, johtamiskorkeakoulu. Tampere. [Cited 4 Aug 2020]. Available at: <http://urn.fi/URN:NBN:fi:uta-201811082799>

Torfig, J., Sørensen, E. & Røiseland, A. 2019. Transforming the public sector into an arena for co-creation: Barriers, drivers, benefits, and ways forward. *Administration & Society*. 51(5), 795-825.

Wampler, B. 2008. When does participatory democracy deepen the quality of democracy? Lessons from Brazil. *Comparative politics*. 41(1), 61-81.



RENEWING AND EVOLVING ENTREPRENEURSHIP

Heidi Myyryläinen

On the Trail of Concept of Social Entrepreneurship

ISEE – INNOVATING SOCIAL ENTREPRENEURSHIP	
Project period	1.2.2020 – 31.12.2022
Funding	Interreg Central Baltic
LAB's role	Lead partner
Project website	http://database.centralbaltic.eu/project/117

Summary

Understanding distinctive features and dynamics of social enterprises and social entrepreneurship creates preconditions for their mission in society. Many examples indicate that social enterprises have been able to solve complex social or environmental challenges.

In this article, I interpret the social entrepreneurship literature and the concept social entrepreneurship and its dimensions in research and the operational definition of European Commission for social enterprises. There is no widely agreed consensus on the definition of social entrepreneurship in the academic literature. Social enterprises are diverse in different countries. Social enterprises should be examined in their social, economic, cultural and political context (Defourny & Nyssens 2010).

Exploring social entrepreneurship

Social entrepreneurship is a new concept in science but the concept has its roots in the history of entrepreneurship. In this article, I discuss some aspects of chosen definitions in social entrepreneurship. Understanding

the concept and educating social entrepreneurship is a mission also in Finnish politics (Kostilainen 2020). Globally social entrepreneurship is expected to have an ability to solve many complex social and economic problems in different fields (OECD 2010).

One of the famous social enterprises worldwide is Grameen Bank in Bangladesh that has admitted microloans for more than three decades for a small group of people, mostly women, in situations when other banks have nothing to offer for poor people. The founder and social entrepreneur Muhammad Yunus and Grameen Bank were awarded the Nobel Peace Prize in 2006. Micro-credit has been an important instrument to break out of poverty, especially for women. Developing financial opportunities has also served advancing democracy and human rights. (Nobel Media 2020)

A famous Finnish example of a social enterprise is the Children's Day Foundation. The Foundation was founded by six Finnish child welfare foundations in 1958. The main purpose of the Foundation is to advance and support economically child welfare in Finland. The foundation owns an amusement park "Linnanmäki" in Helsinki and can operate in other activities too while implementing its mission. It can economically produce resources for the foundations in the field. (Linnanmäki 2020.)

These enterprises or entrepreneurial-acting organisations are not purely profit-seeking organisations, but their ultimate purpose and mission is a social cause. Already in 1985, Drucker pointed out that entrepreneurship as a phenomenon is not limited to profit-seeking organisations (Drucker 1985). In my opinion, this statement should not be considered all that revolutionary after all, as in Europe already in early industrial times co-operative enterprises were founded with social and economic aims hand in hand.

In the International Co-operative Alliances

definition, a cooperative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise. (International Co-operative Alliance 1995) This definition for ICA is inherited from the Rochdale pioneers established in 1844 in England. The consumer co-operative Rochdale pioneers established was an instrument to fight poverty. At that time, during early industrialisation in Rochdale, many workers lived in slums and many families did not own anything but one blanket. (Mayo 2017) Co-operative enterprise was an instrument for a community to get organised economically for the benefit of member owners, who shared the gains and pooled risks. The co-operative movement later landed in Finland, too. Getting organised as co-operatives gave tools to fight poverty and social problems. Co-operatives were instruments to build services when there were no services or of poor quality, to make the market fairer instead of offering overpriced goods, weak competition and monopolies. Co-operatives also were a method to build the first credit systems in Finland and build markets for produced agricultural goods (Kuisma et al. 1999) Defourny & Nyssens (2010) note that in Europe, the concept of social enterprise made its first appearance in 1990 closely linked with the co-operative movement in Italy.

The above-mentioned social enterprise models are diverse, what then is common for social enterprises? Scholars have yet to agree on a universal and distinctive definition (Haugh 2012). The theory building in social enterprise has been difficult as social

enterprises are diverse in different countries and even within one country. Social enterprises operate in different legal forms and ownership structures (European Commission 2019). In a literature review, Kerlin (2010) identified that mostly social enterprise research has been based on studies or the perspectives have covered only one country. On the other hand, using the concept and related concepts to social entrepreneurship had variation. In addition, many companies today have corporate social responsibility programs and social aims and these concepts are used in connection with social entrepreneurship. (Kerlin 2010)

EMES European Research Network Definition for social enterprise

Is social enterprise an economic agent in the market arena like any enterprise? One of the conflicting tensions of social entrepreneurship definition has been whether it is shaped by social value rather than economic value. (OECD 2010) EMES is a research network for social enterprise founded with the support from European Union. According to their influential conception of social enterprise, presented by Defourny & Nyssens (2010) the social impact on the community is not just a consequence or a side-effect of the economic activity but it is the key motive for the economic activity.

According to the EMES European Research Network approach social enterprises have both entrepreneurial and the social dimensions. (Defourny & Nyssens 2010; Defourny 2001, 16–18) They describe the economic and entrepreneurial dimension in the social enterprise with four criteria. In or-

der to be entrepreneurial, an organisation need to have a continuous activity producing goods and/or selling service, a high degree of autonomy, a significant level of economic risk and a minimum amount of paid work. They describe the social dimension in the social enterprise with criteria of an explicit aim to benefit the community, an initiative launched by a group of citizens, a decision-making power not based on capital ownership, a participatory nature, which involves various parties affected by the activity and a limited profit distribution. (Defourny & Nyssens 2010.)

EMES approach for social enterprise frames a governance model of the social enterprise. EMES definition presented by Defourny & Nyssens (2010) takes three standpoints to the governance model of a social enterprise. Firstly, social enterprises are voluntarily created and independently governed. If they receive public or private support they are still independently managed and have the right of “voice and exit”. Secondly, social enterprises typically are “based on collective dynamics and the involvement of different stakeholders in the government of the organization”. Defourny & Nyssens (2010) refer to what Bacchiaga and Borzaga (2003) have called multi-stakeholder ownership. Thirdly, according to the EMES criteria, social enterprises have democratic governance. They refer to co-operatives, which have a “one member, one vote” -policy. In a social enterprise decision-making rights are not distributed by capital shares. (Defourny & Nyssens 2010)

In line with EMES conception of the social enterprise, Huybrechts & Nicholls (2012) sum-

marise dimensions that recur in different social entrepreneurship definitions. One of the dimensions that they found is that social entrepreneurship focuses on social or environmental outcomes primarily over profit maximisation or other strategic considerations. (Huybrechts & Nicholls 2012) So this aspect clearly excludes companies that ultimately aim to maximise profit and can use corporate social programs as instruments. OECD (2010) has proposed that novelty represented by social entrepreneurship is that the economic value serves social objectives. Secondly, Huybrechts & Nicholls (2012) sum up that a feature defining social entrepreneurship in different definitions is innovation, which they describe as something that can be pursued through new organisational models and processes, through new products and services or any new framing of societal challenges. Thirdly, Huybrechts & Nicholls (2012, 3) note that many authors in their social entrepreneurship definitions “emphasize how social entrepreneurs diffuse their socially innovative models via market oriented action that is performance driven, scaling up their initiatives in other contexts through alliances and partnerships, with the idea of reaching broader and more sustainable outcomes.”

EU Operational Definition

An EU operational definition has been influenced by the definitions from Defourny & Nyssens (2010). European Commission (2011) defines a social enterprise as *“an operator in the social economy whose main objective is to have a social impact rather than make a profit for their owners or shareholders. It operates by providing goods and services for*

the market in an entrepreneurial and innovative fashion and uses its profits primarily to achieve social objectives. It is managed in an open and responsible manner and, in particular, involve employees, consumers and stakeholders affected by its commercial activities.” (European Commission 2011, European Commission 2019)

European Commission operational definition for social enterprises covers businesses those “social or societal objective of the common good is the reason for the commercial activity, often in the form of high level of social innovation, those where profits are mainly reinvested with a view to achieving this social objective and the method of organization ownership system reflects their mission using democratic or participatory principles or focusing social justice”. (European Commission 2011, European Commission 2019)

The EU operational definition also gives an opportunity to reflect diverse legal and perceived statuses of social enterprises. The common operational framework also makes it easier to compare the situation between the countries. The European Commission has in-depth country reviews about social entrepreneurship from different countries.

Social entrepreneurship as individual and collective phenomena

Besides above-mentioned definitions there is a wide range of studies on social entrepreneurship. Haugh (2012) observes that social entrepreneurship research has adopted an actor-centred perspective by focusing on describing the characteristics and qualities of social entrepreneurs.

The history of studying entrepreneurship overall has typically focused on the individual-level. Haugh (2012) diagnoses that as motivating and inspiring the stories of the entrepreneurs are, they rarely offer new theories to explain and predict the emergence and activities of social entrepreneurs. Individuals, traits or other explanation models are important study units in social entrepreneurship, but alone that level of analysis would not explain the phenomena related to social entrepreneurship.

As Haugh (2012) had diagnosed the actor-centred perspective in social entrepreneurship studies, also Ghalwash et al. (2017) in their systematic literature review identified that characterising social entrepreneurs was one of the study orientations in the field of social entrepreneurship studies.

In addition, OECD (2010) recognises the debate between the individual social entrepreneur and a collective phenomenon and concludes that social entrepreneurship can be both an individual and a collective phenomenon as there are both individual and collective initiatives. (OECD 2010, 189)

Defourney & Nyssens (2010) view social en-

trepreneurship from the historical perspective. They see social entrepreneurship as deeply rooted in the social, economic, political and cultural contexts. Many scholars take into account contextuality and study social entrepreneurship embedded in their local and national contexts. Yet on the other hand viewing entrepreneurship as context-dependent phenomenon challenges dominant understanding about entrepreneurship and the way it is being studied. (Berglund & Johannisson 2012) Berglund & Johannisson (2012) are scholars who state that overall entrepreneurship should be approached as a contextual phenomenon, including dynamic social practices and the social settings into study setting. Neck, Brush and Allen (2009, 15, cited by OECD 2010) state that understanding the landscape in the field of social entrepreneurship is more important than the consensus on the definition of social entrepreneur or social entrepreneurship. At the same time, clear agreement on the meanings – or the variety of meanings – would make it easier to address the value and success factors in social entrepreneurship (Thompson & Scott 2013).



References

Berglund, K. & Johannisson, B. 2012. Introduction: in the beginning was societal entrepreneurship. In: Berglund, K., Johannisson, B. & Schwarz, B. Societal entrepreneurship. Positioning, penetrating, promoting. Cheltenham, UK: Edward Elgar Publishing Limited. 1- 28.

Defourny, J. 2001. From Third Sector to Social Enterprise. In Borzaga, C. & Defourny, J. (eds.). The Emergence of Social Enterprise. London and New York: Routledge. 1-28.

Defourny, J. & Nyssens, M. 2010. Conceptions of Social Enterprise and Social Entrepreneurship in Europe and the United States: Convergences and Divergences. Journal of Social Entrepreneurship, 1: 1, 32 — 53.

Drucker, P. 1985. Innovation and Entrepreneurship. London: Heinemann.

European Commission. 2011. Social Business Initiative Creating a favourable climate for social enterprises, key stakeholders in the social economy and innovation Brussels, 25.10.2011 COM (2011) 682 final. [Cited 4 Sept 2020]. Available at: <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0682:FIN:EN:PDF>

European Commission. 2019. Directorate-General for Employment, Social Affairs and Inclusion. 2019. A map of social enterprises and their eco-systems in Europe. Country report Finland. Luxembourg: Publications Office of the European Union. [Cited 4 Sept 2020]. Available at: <https://europa.eu/!Qq64ny>

Ghalwash, S., Tolba, A. & Ismail, A. 2017. What motivates social entrepreneurs to start social ventures? An exploratory study in the context of a developing economy. Social Enterprise Journal. Vol. 13, No. 3, 268-298. [Cited on 4 Sept 2020]. Available at: <https://doi-org.ezproxy.saimia.fi/10.1108/SEJ-05-2016-0014>

Haugh, H. 2012. The importance of theory in social enterprise research. Social Enterprise Journal. Vol. 8 No. 1, 7-15. [Cited 4 Sept 2020]. Available at: <https://doi-org.ezproxy.saimia.fi/10.1108/17508611211226557>

Huybrechts, B. & Nicholls, A. 2012. Social Entrepreneurship: Definitions, Drivers, and Challenges. In: Volkmann, C., Tokarski, K. & Ernst, K. (eds.). Social Entrepreneurship and Social Business: An Introduction and Discussion with Case Studies. Wiesbaden: Gabler Verlag. 31-48.

International Co-operative Alliance. 1995. The statement on the co-operative identity. [Cited 4 Sept 2020]. Available at: <https://www.gdrc.org/icm/coop-principles.html>

Kerlin, J. A. 2010. A comparative analysis of the global emergence of social enterprise. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*. Vol. 21, issue 2. 162-79.

Kostilainen, H. 2020. Yhteiskunnalliset yritykset Suomessa. Työ- ja elinkeinoministeriön raportteja ja julkaisuja 2020: 10. [Cited 4 Sept 2020]. Available at: https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/162094/TEM_2020_10.pdf

Kuisma, M. Henttinen, A. Karhu, S. & Pohls, M. 1999. *Kansan talous. Pellervo ja yhteisen yrittämisen idea 1899 – 1999*. Pellervo-seura ry. Helsinki: Kirjayhtymä.

Linnanmäki. 2020. Lasten päivän säätiö. [Cited 4 Sept 2020]. Available at: <https://www.linnanmaki.fi/fi/lasten-paivan-saatio/>

Mayo, E. 2017. A short history of co-operation and mutuality. *Co-operatives UK*. [Cited 4 Sept 2020]. Available at: https://www.uk.coop/sites/default/files/uploads/attachments/a-short-history-of-cooperation-and-mutuality_ed-mayo-web_english_0.pdf

Nobel Media AB. 2020. The Nobel Peace Prize for 2006. The Noble Prize. [Cite 4 Sept 2020]. Available at: <https://www.nobelprize.org/prizes/peace/2006/press-release/>

OECD. 2010. *SMEs, Entrepreneurship and Innovation*. OECD Studies on SMEs and Entrepreneurship. OECD Publishing. [Cited 4 Sept 2020]. Available at: <http://dx.doi.org/10.1787/9789264080355-50-en>

Thompson, J. Scott. J.M. 2013. Social enterprise or social entrepreneurship: which matters and why? In: Denny, S. Seddon, F. (eds). *Social Enterprise: Accountability and Evaluation Around the World*. London. Routledge. 13-27.



BUSINESS DESIGN AND THICK VALUE

Sirpa Varajärvi

Delivering an engaging learning experience through gamification

E-LEARNING REVISION ACTIVITY AND COLLABORATIVE KNOWLEDGE TEACHING (E-REACT)	
Project period	1.9.2018 - 31.8.2021
Funding	Erasmus 2014-2020
LAB's role	Osatoteuttaja
Project website	https://lab.fi/en/project/e-learning-revision-activity-and-collaborative-knowledge-teaching-e-react

Summary

LAB University of Applied Sciences is a partner in an Erasmus+ funded project e-learning Revision Activity and Collaborative Knowledge Teaching (e-REACT). The project develops and implements an online learning gaming tool "Academ'Quiz"(AQ). The project develops the game's academic contents in subject areas such as financial management, marketing, and communications. Also game elements which aim to motivate and encourage the student to learn through the game are included.

The AQ tool could best serve as a learning support in introductory level courses. In LAB University of Applied Sciences business simulations have already been in use in several courses. Based on observations and feedback they have resulted in mostly positive learning experiences and outcomes.

Introduction

Gamification, as defined by Deterding et al. (2011, 9), refers to "the use of game design elements in non-game contexts". The phenomenon has reached and impacted our society in many aspects. It has been applied for ex-

ample in education, working life, healthcare, and well-being. The development is likely to continue; as Pauliina Tuomi (University consortium of Pori 2015) envisions: "Soon we won't be talking about game culture as a separate entity, as everything becomes one

big culture.”

In the pedagogical context, gamification focuses on enhancing learning. The purpose is to promote motivation and engagement in learning (Alsawaier 2018). Although there is no clear theoretical framework for explaining how gamification enhances user engagement, many studies have shown that the introduction of game elements increases students' level of engagement (Alsawaier 2018; Suh et al. 2016).

Gamification can also be seen as a way to create a more entertaining learning experience. Bringing entertaining features into education is not a totally new phenomenon. In 1980s the concept “edutainment” emerged as a portmanteau of education and entertainment (Pojani & Rocco 2020). Alongside, the concept of serious games has evolved. Broadly defined, serious games can be seen as games whose main purpose is other than entertainment (Laamarti et al. 2014). From the education point of view, the main purpose is to enhance learning (Westera 2019).

Gamification elements

There are several gamification features and elements that can be used in educational environments. Including entertaining elements in games is important for engaging the users and thus achieving desired learning outcomes (Perttula et al. 2017). Game elements in pedagogical environments often allow social interaction between players and promote critical thinking skills (Alsawaier 2018). Furthermore, at best, they support multisensory, active, experiential, and problem-based learning (Pesare et al. 2016).

Gamification elements could be catego-

rised as presented in image 1. The first category is performance. This includes elements like badges, trophies, medals, levels, progress bars, scores, and skill points, which can be used to provide feedback to the user. (Toda et al. 2019.) These are important for motivating and engaging students. From learning point of view, the recovery of prior knowledge is supported, as players need to use previously learned information to improve their score in the game (Pesare et al. 2016).

The second category of elements is called ecological. This is related to the properties of the gaming environment with the purpose of producing interaction with the user. Elements of chance, imposed choice or time pressure are examples of features that fall into the ecological dimension. The third category of elements is related to social elements with the aim of enabling interaction between the users in the gaming environment. For example, competition with leader boards, challenges initiated by users and tasks that require teamwork are elements that enhance social interaction. The fourth category includes personal elements that enhance the user experience. For instance, personal objectives, milestones, surprises, or boosts may be included. Finally, some fictional elements can be added, for example through storytelling. (Toda et al. 2019.)

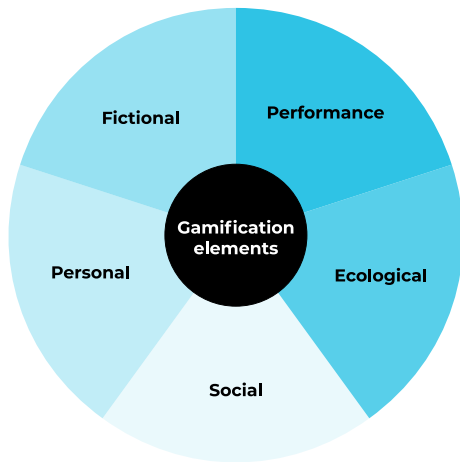


Image 1. Elements of gamification
(adapted from Toda et al. 2019)

AQ Tool being developed in e-REACT project

LAB University of Applied Sciences is a partner in an Erasmus+ funded project called e-learning Revision Activity and Collaborative Knowledge Teaching (e-REACT). One of the targets of the project is to develop and implement an online learning gaming tool, “Academ’Quiz” (AQ). The tool is supposed to provide students an engaging and playful learning experience. The overall target is to enhance students’ motivation and reduce dropouts.

The basic principle of the AQ tool is fairly simple – students get single choice questions and try to answer them correct. Teachers as well as students can contribute to the content production by adding or suggesting new questions to the tool. Each ques-

tion is supported by pedagogical notes, from which students can get an explanation for the correct answer. Content for several subject fields, such as accounting, marketing, and English language, is being developed in the e-REACT project. New subject fields can be introduced as long as a decent amount of questions and pedagogical notes are created to enable appropriate gaming environment within the subject field.

Several gamification elements that support user engagement are included in the AQ tool. Students will earn points and trophies, which could be seen as part of the “performance” features of Toda’s (2019) categorisation. Social elements are included by enabling students to challenge and compete against each other. Students may create a tribe within and between a group of students and work within a team, thus generating a peer learning effect. Personal and fictional elements are provided, for example by allowing user to create a personal avatar.

From pedagogical point of view, the AQ tool could be seen as an effective way to learn new concepts and issues. Looking at learning through Bloom’s (revised) taxonomy (Armstrong 2020), AQ tool would mainly provide learning on the first category “remember”, possibly also on the “understand” and “apply” categories. Repeating questions on the same subject field and supporting pedagogical notes create a good platform for sticking information in memory. Furthermore, questions may be formulated so that answering them requires some deeper understanding and ability to apply knowledge. The AQ tool provides detailed statistics about the performance of the students, which can

be followed by teachers and possibly used in course evaluations.

Gamification supports learning in LAB University of Applied Sciences

In LAB University of Applied Sciences elements of gamification have already been in use in several courses. For example, Cesim business simulations (see Cesim 2020) have been in use for several years in both Lahti and Lappeenranta campus. Further examples are VIBu and SAP Global Bike Inc. simulations, which have been used in logistics courses (Sallinen & Tuominen 2019).

Courses based on Cesim business simulations have generally gained positive feedback. Based on the feedback and teachers' experiences, students' engagement has been on a very good level. In their instant feedback after finishing Cesim Global Challenge business simulation game, students commented the simulation being addictive and fun. They also thought that playing the simulation game encouraged them to find out and learn more about the concepts and subject fields covered in the game. Also, from the logistic simulations feedback has been largely positive (Sallinen & Tuominen 2019).

Although the experiences from the above-mentioned business simulations have been largely positive, there are some challenges. For instance, based on the feedback from the VIBu simulation, some students found it challenging to solve technical problems in the fast-paced simulation (Sallinen & Tuominen 2019). Some students playing the Cesim Global Challenge game, found it hard to get a grasp on all the are-

as covered in the simulation. Especially decisions related to finance were found to be challenging and some students would have appreciated deeper knowledge in the field before starting the game.

Using games to motivate students in early phase and in distance learning

The AQ tool could best serve as a learning support in introductory level courses. It could encourage and motivate students to learn and embrace the theoretical basis and key concepts related to a subject. Then later, they could apply that knowledge in for instance working life related projects or earlier mentioned simulated learning environments. The idea is supported by Bell (2017, 156) as he points out that gamification may have the most benefit for introductory level courses, as students new to the subject often lack the confidence and motivation for the matter.

A game application like the AQ tool, could also be used to motivate students in distance learning. In 2020, the COVID-19 pandemic forced teaching and learning into online mode as in-class teaching was suddenly no longer possible. Already before the pandemic, distance learning has been growing for many years and it is likely that the development will continue even after the pandemic situation (Koksal 2020). Traditional teaching methods need to be re-thought and methods for motivating and engaging students when outside classrooms are needed. Gamification and game-based environments could provide support for this, as suggested e.g. by Huang and Hew (2018).

Re-thinking teaching strategies

Using games and gamification in educational context requires some re-thinking of teaching strategies. As Folmar (2015, 5) puts it “Gamification is not just making a game, which imparts a lesson; it is applying game thinking to how we impart that lesson and continuing to develop it based on the feedback from the players”. On the other hand, the educational targets and learning objectives should not be forgotten. A game that

supports the curricula and learning objectives should be chosen – not vice versa. Furthermore, even if gamification could support distance learning, the role of teacher or instructor should not be diminished. The teacher needs to ensure the process runs effectively and interact dynamically with the students. At its best, a game application in an educational context can provide an engaging and joyful learning experience whilst fulfilling the learning objectives.

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References

Alsawaier, R. 2018. The effect of gamification on motivation and engagement. International journal of information and learning technology. Vol. 35 (1), 56-79. [Cited 4 Sep 2020]. Available at: <https://doi.org/10.1108/IJILT-02-2017-0009>

Armstrong, P. 2020. Bloom’s Taxonomy. Center for Teaching, Vanderbilt University. [Cited 4 Sep 2020]. Available at: <https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/>

Bell, K. 2017. Game On!: Gamification, Gameful Design, and the Rise of the Gamer Educator. Baltimore: Johns Hopkins University Press. [Cited 4 Sep 2020]. Available at: <http://search.ebsco-host.com.ezproxy.cc.lut.fi/login.aspx?direct=true&db=e000xww&AN=1501176&site=ehost-live>

Cesim. 2020. Cesim Business Simulations Overview. [Cited 5 Oct 2020]. Available at: <https://www.cesim.com/simulations/overview>

Deterding, S., Dixon, D., Khaled, R. & Nacke, L. 2011. From game design elements to gamefulness: defining "gamification". In: Lugmayr, A. (ed.). Proceedings of the 15th International Academic Mindtrek Conference: Envisioning Future Media Environments. New York: ACM. 9–15. [Cited 4 Sep 2020]. Available at: <https://doi.org/10.1145/2181037.2181040>

Folmar, D. 2015. Game it up: Using Gamification to Incentivize your Library. Lanham, MD: Rowman & Littlefield.

Huang, B. & Hew, K. F. 2018. Implementing a theory-driven gamification model in higher education flipped courses: Effects on out-of-class activity completion and quality of artifacts. *Computers & Education*. Vol. 125, 254-272. [Cited 4 Sep 2020]. Available at: <https://doi.org/10.1016/j.compedu.2018.06.018>

Koksal, I. 2020. The Rise Of Online Learning. *Forbes*. [Cited 4 Sep 2020]. Available at: <https://www.forbes.com/sites/ilkerkoksal/2020/05/02/the-rise-of-online-learning/#3eebec9772f3>

Laamarti, F., Eid, M. & Abdulmotaleb, E. S. 2014. An Overview of Serious Games. *International journal of computer games technology*. Vol. 2014. [Cited 4 Sep 2020]. Available at: <https://www.hindawi.com/journals/ijcgt/2014/358152/>

Perttula, A., Kiili, K., Lindstedt, A. & Tuomi, P. 2017. Flow experience in game based learning – a systematic literature review. *International Journal of Serious Games*. Vol 4 (1). [Cited 4 Sep 2020]. Available at: <https://doi.org/10.17083/ijsg.v4i1.151>

Pesare, E., Roselli, T., Corriero, N. & Rossano, V. 2016. Game-based learning and gamification to promote engagement and motivation in medical learning contexts. *Smart Learning Environments*. Vol. 3 (5). [Cited 4 Sep 2020]. Available at: <https://doi.org/10.1186/s40561-016-0028-0>

Pojani, D. & Rocco, R. 2020. Edutainment: role-playing versus serious gaming in planning education. *Journal of planning education and research*. [Cited 4 Sep 2020]. Available at: <https://doi.org/10.1177/0739456X20902251>

Sallinen, N. & Tuominen, U. 2019. Teaching and learning challenged by logistics industry competence requirements – Methods for Increased Work-World Relatedness in Applied Logistics Higher Education. In publication: Sallinen, N. & Kotonen, U. (eds.) *Smart Business Annual Review 2019*. Lahti: Lahti University of Applied Sciences. Lahden ammattikorkeakoulun julkaisusarja, osa 53. 160-167. [Cited 4 Sep 2020]. Available at: <http://urn.fi/URN:ISBN:978-951-827-316-8>

Suh, A., Wagner, C. & Liu, L. 2016. Enhancing User Engagement through Gamification. The journal of computer information systems. Vol 58 (3), 204-213. [Cited 4 Sep 2020]. Available at: <https://doi.org/10.1080/08874417.2016.1229143>

Toda, A. M., Klock, A. C. T., Oliveira, W., Palomino, P. T., Rodrigues, L., Shi, L., Bittencourt, I., Gasparini, I., Isotani, S. & Cristea, A. I. 2019. Analysing gamification elements in educational environments using an existing Gamification taxonomy. Smart Learning Environments. Vol. 6 (16). [Cited 4 Sep 2020]. Available at: <https://doi.org/10.1186/s40561-019-0106-1>

University consortium of Pori. 2015. Gamification. YouTube video. [Cited 4 Sep 2020]. Available at: <https://www.youtube.com/watch?v=jluXyleQ4ZQ>

Westera, W. 2019. Why and how serious games can become far more effective: accommodating productive learning experiences, learner motivation and the monitoring of learning gains. Educational Technology & Society. Vol. 22 (1), 59–69. [Cited 4 Sep 2020]. Available at: <https://www.jstor.org/stable/26558828>



NEW RADICAL INITIATIVES

Teresa de la Cruz, Miika Kuusisto, Mohamed Ouasghiri, Ullamari Tuominen & Taina Vuorela

Connecting Disciplines and Cultures in Healthcare Logistics Pilot Training: An Eye-Opening Experience

HELP – THE HEALTHCARE LOGISTICS EDUCATION AND LEARNING PATHWAY PROJECT	
Project period	2017 - 2021
Funding	Erasmus+ KA2 – Cooperation for innovation and the exchange of good practices
LAB's role	Coordinator
Project website	https://help-project.eu/



Summary

The authors are all part of the HELP Project team; they develop healthcare-logistics-related curricula in five (5) countries via creating and piloting new course design and materials. The Bachelor-level pilot training in healthcare logistics took place at the LAB University of Applied Sciences (LAB) in February 2020 and connected students from five disciplines and seven cultures. The Master-level online pilot training was launched in May 2020 by ZLC-MIT SCALE (ZLC). They were eye-opening experiences both for students and lecturers, as they contributed to a greater awareness of the importance of multidisciplinary process thinking in healthcare logistics.

Introduction to Healthcare Logistics Education

The article presents both student and teaching staff experiences of the piloting of

Healthcare Logistics training that was developed in the framework of HELP – the Healthcare Logistics Education and Learning Pathway project (2017-2021). The project is funded

STRUCTURE OF THE PATHWAY DEVELOPMENT

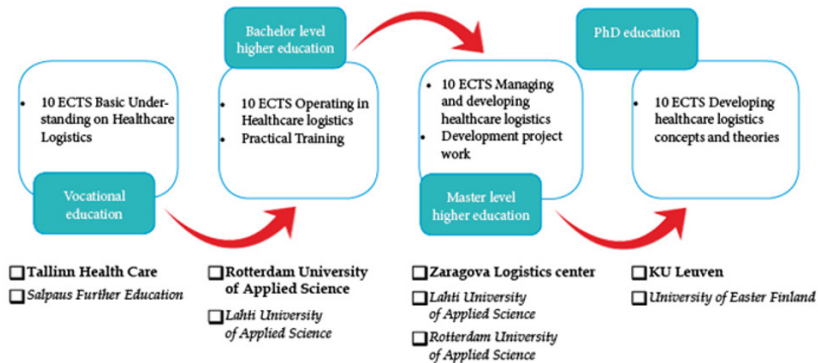


Image 1. Healthcare Logistics Learning Pathway Development (Image: Miika Kuusisto)

in the context of Erasmus+ KA2 – Cooperation for innovation and the exchange of good practices.

The [HELP project](#) addresses the challenges that healthcare organisations face in the field of logistics. Because of their changing needs, a novel profession, namely, that of Healthcare Logistician, was created. This required a new job description with a set of competence requirements as a basis for the first study modules for healthcare logisticians. The increasing demand for healthcare services requires high quality services that are congruent with rapidly changing environments, while also taking into account cost and margin pressures, as well as and increasing regulatory and compliance requirements with various directives. As a response, organisations are seeking new ways to develop their operational efficiency, cut costs

and improve patients' care and safety. (Gerald et al. 2017.)

There is a general lack of awareness about supply chain management in healthcare organisations. In essence, the education of personnel conducting healthcare logistics is inadequate, and full-time employees who are educated in logistics are sorely lacking in knowledge about healthcare. Previous experiences show that logistics costs can be reduced by up to 30 % by implementing a healthcare logistician operating model. The model is interdisciplinary and its benefits involve standardisation of the use of supplies, reduction in travel and search times, improved supply flows, increased efficiency in teamworking, clearly defined process ownerships, balanced workloads, and results in better spatial use solutions, thereby improving quality and patient safety. (Zhang et al. 2018.)

LAB University of Applied Sciences has earlier been involved in different initiatives related to healthcare logistician education in the past, such as the Healthcare Logistician project funded by the Finnish Funding Agency for Technology and Innovation (2012-2013) and the healthcare logistician further education in Finland (2013-2020) (see Kotonen, Tuominen & Kuusisto 2013; see also Kotonen et al. 2015). Based on these experiences, the development of the healthcare logistician concept and logistics operating model in healthcare organisations require higher level education. HELP project has bridged this gap via developing vocational, BSc and MSc degree level education and piloting the studies. This serves not only students' personal and education institutions' goals, but also the needs of healthcare organisations, supporting the implementation of reforms in line with the 2017 EU Agenda for Higher Education (ibid.; see also Filippakou 2017) See Image 1.

During the HELP project's final year, the worldwide COVID-19 pandemic first caused delays in the timing of some of the planned intensive piloting weeks, and later, some of the pilot training weeks were converted to online versions. The vocational level pilot training took place first (2019-2020) - in Tallinn, Estonia and Lahti, Finland. The Bachelor-level pilot training in healthcare logistics took place at LAB University of Applied Sciences in Lahti, Finland in February 2020. The Master-level online pilot training was launched by Zaragoza Logistics Center, Spain in May 2020. They provided eye-opening experiences, as they, inter alia, contributed to students' greater awareness of the impor-

tance of a multidisciplinary approach and process thinking in healthcare. It became clear to the participants that obtaining better quality and safety in healthcare requires improved insight into healthcare processes and a well-orchestrated alignment of information flows and materials.

Piloting Bachelor- and Master-level Healthcare Logistics Training Modules

During the first two years of the HELP project (see Image 1 above), different preparatory tasks were carried out as a basis for the pilot training weeks with students – professionals of healthcare and logistics business – interested in increasing their know-how and skills of healthcare logistics. During the Intensive Pilot Weeks, the developed concepts and course materials were put to a test as prototypes. The final structure of the study modules, course contents, and teaching methods were based, inter alia, on the following preparatory measures:

- Desk research analysis of the current state of healthcare logistics in partner countries
- Development of case studies of the healthcare organisations' logistics
- Development of healthcare logistics competence framework

In February 2020, the Rotterdam University of Applied Sciences (RUAS) and the LAB University of Applied Sciences (LAB) piloted Bachelor-level education in Finland. The

piloted material was based on the competences and learning objectives that were previously surveyed, discussed and adopted in the project, as preparatory measures. For the **Bachelor Pilot** the themes and topics listed below were chosen. The group was very international, as the participating students represented seven countries: Finland, Vietnam, Ghana, the Netherlands, Eritrea, Kenya and Nigeria. The students represented five disciplines, namely nursing, business logistics, international business, business information technology and healthcare logistics.

- Orientation to Healthcare Logistics landscape (1 ECTS)
- Critical environment (2 ECTS)
- Logistics Improvement methods and tools in healthcare (3 ECTS)
- Capacity management (3 ECTS)
- ICT in healthcare logistics (1 ECTS)

The Bachelor students were asked to prepare for the pilot week by means of a pre-assignment involving orientation to the healthcare logistics system in their own country in addition to studying theoretical articles on healthcare logistics. While studying, they were asked to maintain a learning diary during the Intensive Pilot Week. The learning outcomes were presented by the students during the last day of the week. During the pilot, not only the understanding of theory but also the application and discussion of implementing healthcare logistics were equally important.

Moodle was chosen as an online learning platform for both Pilots, as it is highly customisable and most of the students were already familiar with it.

The **Master-level** pilot, an entirely online module, was launched in May 2020. It was focused on managing and developing healthcare logistics and aimed to give knowledge, competences, and skills to manage logistics operations in healthcare organisations, as well as to develop and implement the

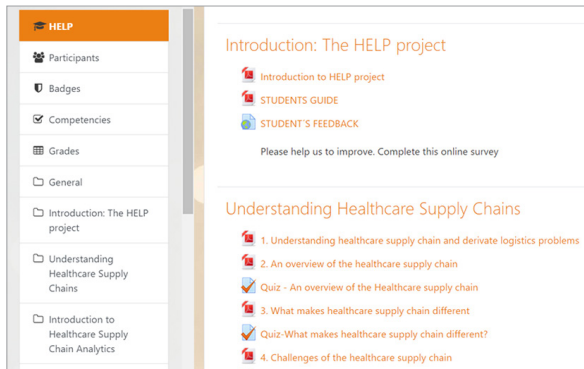


Image 2. Platform screenshot



Image 3. Bachelor pilot group. (Photo: Ullamari Tuominen)

healthcare logistician concept in demanding healthcare organisations. The students enrolled in the Pilot from the project partner institutions or their networks and represented five (5) different nationalities: Spanish, Panamanian, Dutch, Indian, and Finnish. Their profile was heterogeneous, although most of them had already completed a Master's degree.

From the lecturer's point of view, it was challenging to decide what content to pilot due to the constraint of 8 ECTS points. It was decided to prepare an initial cross-cutting module:

- an overview of the healthcare supply chain

- the main challenges and differences of the healthcare supply chains.

This established a common ground for the students coming from different backgrounds. After the introduction, a module on Healthcare Supply Chain Analytics was delivered, comprising a brief introductory session to the topic, and two sessions about forecasting methods and machine learning in healthcare supply chains. This selection of topics was based on the previous competence analysis that showed that knowledge in these areas was demanded by healthcare organisations.

All the course content was uploaded to the Moodle platform and auto-evaluation exercises (multiple choice quizzes) were cre-

ated for each lesson. An online forum was created for the students to discuss or raise questions and an email account for interacting with the project manager and lecturers was created.

After completing the Pilots, students received a certificate for 8 ECTS points in the Master Pilot and 10 ECTS points in the Bachelor Pilot.

Experiences from Pilot Training: several bouquets, few brickbats

The pilot training courses - where the concepts and materials developed during the HELP project were prototyped - were evaluated by participating students and teachers via an online survey. The students (18 participants in the Bachelor Pilot, 9 in the Master

Pilot) answered questions related to learning content and didactics. The survey consisted of questions about the clarity of teaching materials and the efficiency of chosen learning methods and approaches. Generally, the students were pleased with both Pilots. The results of the survey conducted among the students who took part in the bachelor's pilot project are briefly discussed below.

Bachelor-level Pilot

A large proportion of the students felt that the course had significantly improved their professional development in the field of Healthcare Logistics to such a degree that it should be part of their regular curriculum. They especially appreciated elements such as clear course outline, teamwork skills, hos-

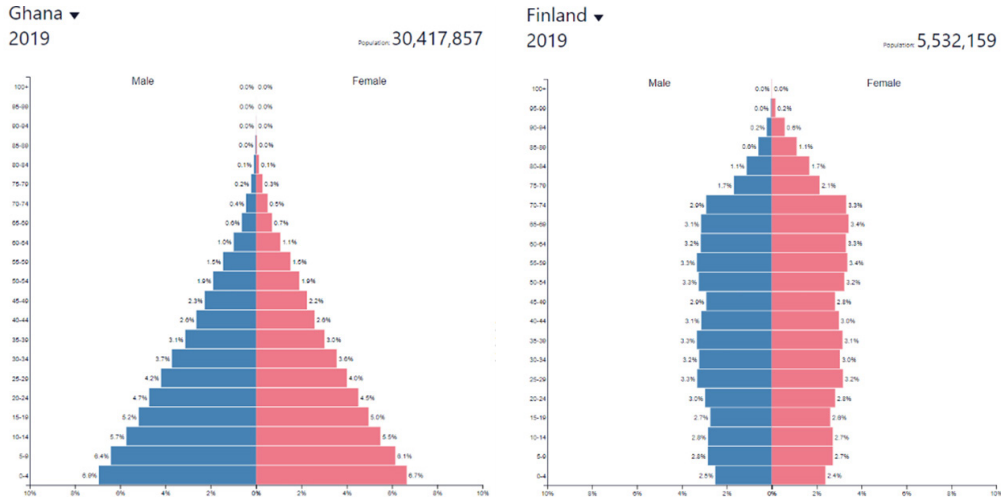


Image 4. Population pyramids in Ghana vs. Finland (PopulationPyramid.net 2019)

pital visit, but suggested that this be complemented with a visit to a warehouse. The students also enjoyed multidisciplinary tasks and appreciated cross-cultural aspects, such as learning interesting domain-related facts from different countries, e.g. differences in demographic challenges; see Image 4.

Image 4 demonstrates that the challenges in the healthcare sector vary significantly in different parts of the world. Finnish demographics with an aging population results in different healthcare challenges when compared with Ghana, as the country has a more balanced demographical structure. This is relevant for the field of healthcare logistics, as it has a bearing on e.g. the supplies needed. The multi-cultural groups of the pilots allowed for such cross-cultural comparisons and learning experiences.

Master-level Pilot

According to the feedback survey, the students expressed satisfaction with the Master Pilot training; they acquired important insights, knowledge and skills and they appreciated the flexibility of online learning. They considered the course content relevant for their education; it gave them competences to work better in the multidisciplinary field of healthcare logistics. Nevertheless, the following opportunities for improvement were identified:

- to include more practical details about everyday logistics and supply chains in hospitals
- to include short videos to explain concepts and exercises.

The students' general opinion was that the learning methods of the course module supported their learning; the quizzes were appropriate for evaluating the learning outcomes and the online platform was easy to use. When comparing the online and offline Pilots, they require different pedagogical approaches.

Lecturers' experiences and recommendations

The lecturers' work involved careful pre-planning. They faced the challenge of where to place the focus in the Pilots of healthcare logistics: should the focus be on patients or materials? Material-centric logistics address the positioning, storage and circulation of goods and materials, such as blood and pharmaceutical products within the hospital or the healthcare system (Zhang et al. 2018), while patient-centric logistics relate to patient flows through the healthcare systems. In the present context, quality, safety and efficiency of services for patients were key issues. According to the survey with the lecturers of the Pilots, more time and resources would be required for joint planning across disciplines. Also, the contact sessions should contain plenty of interaction with students engaged in group work; the multi-disciplinary and cross-cultural nature of the Pilots set its own challenges on learning. As previous research has showed that non-technical skills can effectively be trained via simulations (ibid.), including a simulation in Healthcare logistics education would also enhance achieving important staff skills.

Conclusions and Discussion

The HELP project addressed the Bachelor and Master level pilots in two different ways: traditional face-to-face and online learning. The result of the surveys conducted among students and lecturers showed that both pilots successfully accomplished their main educational goal: enhancing multi-disciplinary awareness of the logistics process in healthcare. The feedback will be taken into account to improve the future editions of the modules: more multidisciplinary planning by teachers and more interactional engagement in guiding multidisciplinary and cross-cultural group work sessions.

The Master-level module was piloted in the middle of the COVID-19 outbreak in Europe when the project partner countries were in a 'lockdown' situation. Due to the fact that the course was organised online according to original planning, the pandemic did not affect the pilot. However, some students did ask for extra time to complete the course. Flexibility is one of the key features of online learning; in the present circumstances it has shown to be crucial. It would seem that in the coming years, flexible and hybrid learning that combines face-to-face with online education, will be 'the new normal'.

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References

- Filippakou, O. 2017. The evolution of the quality agenda in higher education: the politics of legitimation. *Journal of Educational Administration and History*. 49:1, 37-52. [Cited 4 Sept 2020]. Available at: <https://doi.org/10.1080/00220620.2017.1252738>
- Gerald, J., Ledlow R., Manrodt K., Schott D. 2017. *Health Care Supply Chain Management: Elements, Operations, and Strategies*. Burlington, MA: Jones & Bartlett Learning.
- Kotonen, U., Tuominen, U., Kuusisto, M. 2013. *Healthcare Logician: A New Profession Needs a New Education*. International Conference: The Future of Education, 3rd Edition.
- Kotonen, U., Tuominen, U., Maksimainen, A. N. & Kuusisto, M. 2015. Experiences from Healthcare Logistician Education. *Journal of Modern Education Review*. Vol. 5 (8), 765–777.

Min, H. 2014. Healthcare Supply Chain Management: Basic Concepts and Principles. Dallas: Business Express Press. Healthcare Management Collection.

PopulationPyramid.net. 2019. Population Pyramids of the World from 1950 to 2100. [Cited 7 Sept 2020]. Available at: <https://www.populationpyramid.net/>

Zhang, C., Grandits T., Härenstam K. P., Hauge J. B. & Meijer S. 2018. A systematic literature review of simulation models for non-technical skill training in healthcare logistics. *Advances in Simulation*. 3, 15. [Cited 15 Sept 2020]. Available at: <https://doi.org/10.1186/s41077-018-0072-7>



Commercialization of Innovations is one of the four strategic focus areas of the research, development and innovation (RDI) activities of the LAB University of Applied Sciences. The aim of this review is to communicate the actions and results of ongoing and recently completed RDI projects in the Innovation Commercialisation focus area as well as lessons learnt from and experiences yielded by the experiments carried out as part of these projects. The publication consists of articles that are categorised under the focus area's four themes – Experimental development ecosystems for innovations, Renewing and evolving entrepreneurship, Business design and thick value and New radical initiatives.

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